Fisheries Bureau efficiency examples for federal and private fund-source programs

This briefing document describes efficiencies made within federal and privately-funded programs managed by the Fisheries Bureau.

In state fiscal year 2009, the fisheries bureau expended $26,737,653. Approximately 78% of all expenditures ($21,000,000) occurred in programs funded by federal and private dollars contracted to address specific, non-discretionary work. Federal programs accounted for the majority of expenditures (85% or $17,900,000). Within the federal expenditure category, programs funded by the Bonneville Power Administration (BPA), the USFWS Lower Snake River Compensation Program (LSRCP), and the USFWS Wildlife and Sportfish Restoration Program (PR/DJ) comprised almost 80% of all spending ($14,000,000).

Federally-funded projects, and associated budgets, have evolved to the point where very efficient relationships now exist between funds received and services provided. A new level of scrutiny geared towards identifying inefficiencies exists at the funding agency level requiring Department program managers to carefully scrutinize budgets to ensure they address current expectations. Where little administrative interaction between funder and contractor existed in the past, Department program managers now spend considerable time coordinating with funding agency representatives to ensure that static (or shrinking) sources of funding are used as effectively as possible. For the largest federal programs, task-based budgeting has been implemented to control costs. This approach requires Department managers to approach budget development using zero-based-budgeting principles. Three specific examples where efficiency measures have been implemented are provided below. Examples demonstrate actions taken to "fine tune" the accuracy of the budgeting process as well as measures taken to use funds more effectively.

Bonneville Power Administration:

A completed statement of work and budget package is attached for a representative BPA-funded project – the Redfish Lake sockeye salmon captive broodstock project. The contract is organized around "work elements." Work elements are standardized for all BPA-funded projects providing additional flexibility to "roll-up" budget or biological information on any geographical or physical scale. Work elements are further defined by "milestones" or tasks (finer scale). All budgeting is done at the work element level providing greater certainty that budget amounts align with actual costs to implement tasks and address objectives. All budgeting is reviewed by a BPA Contracting Officer as well as a BPA Technical Representative assigned to the project. Technical Representatives review project expenditures and spending patterns and routinely question the appropriateness of specific purchases at any time during the contract year. These procedures and efficiencies have helped BPA maintain an effective program in an atmosphere where budgets have remained "flat" but where personnel and operating expenses have increased.

USFWS Lower Snake River Compensation Plan:

A completed statement of work and budget are attached for one representative program – the LSRCP hatchery monitoring and evaluation project. All work is organized by the species monitored (e.g., Chinook salmon and steelhead) and by work task. Similar to the process described above for BPA-funded programs, the LSRCP requires that budgeting be established at the task level to provide greater certainty that budgets reflect the true cost of addressing objectives. Annually, at the outset of each new fiscal cycle, budgets are reviewed by the LSRCP Program Coordinator. At the end of each fiscal cycle, goal attainment and budget spending patterns are reviewed (budgets are adjusted to reflect findings

identified during this iterative process). To help offset rising personnel and operating costs, certain project expenses (e.g., utilities, fish feed, coded-wire tags, and capital equipment and repairs) are now purchased directly by the LSRCP office. The direct purchase of certain goods and services is an efficiency measure that generates savings equal to the amount traditionally spent on indirect charges.

Idaho Power Company:

Approximately 80% of the private funding received by the Fisheries Bureau is associated with the Idaho Power Company (approximately $4,000,000 annually). IPC funds are entirely dedicated to addressing mitigation responsibilities identified in the Hells Canyon Settlement Agreement (non-discretionary funds). Statements of work and budgets are developed cooperatively to address IPC responsibilities and Department expectations. Because responsible fiscal management is standard operating procedure for the IPC, Department budgets go through a thorough review process with non-essential objectives usually getting deleted. Similar to the USFWS program discussed above, the IPC has also instituted a direct purchase policy for some goods and services. Certain tags, capital repairs, capital equipment, utility expenses, and fish food are now purchased directly by the IPC.

As funding agencies have tightened controls on spending and increased their oversight of budgets and the implementation of contracted work, the Department has made adjustments to ensure that programs remain as effective as possible. Budgets are now carefully scrutinized to make sure federal and private funds are used efficiently. Operational efficiencies have also been implemented to adjust to the reality and need to "do more with less" as inflation has increased faster than budget bottom lines. Through adaptive management, the Fisheries Bureau has remained effective in its use of federal and private funds. Programs are being implemented as efficiently as possible and services and products are being maintained. Looking forward, the Fisheries Bureau will continue to pursue new efficiencies, such as the subcontracting of specific services, to make the best use of limited funding.

Statement of Work Report

Project Title:	Snake River Sockeye Captive Propogation		
Project #:	2007-402-00		
Contract Title:	1991-072-00 EXP IDFG REDFISH LAKE SOCKEYE SALMON CA		
Contract #:	33644 [ISSUED]		
Province:	Mountain Snake	**Subbasin:**	Salmon
Workorder ID:	200283	**Task ID:**	1
Perf. Period Budget:	$1,069,958	**Perf. Period:**	7/1/2007 - 6/30/2008
Contract Type:	Contract (IGC)	**Pricing Type:**	Cost Reimbursement (CNF)
Contractor(s):	Idaho Department of Fish and Game (IDFG) (Prime - IDFISGAM00)		
BPA Internal Ref:	33644		
SOW Validation:	Last validated 06/21/2007 with 0 problems, and 4 reviewable items		
Contract Documents:	Property Inventory (08/01/2007)	FY 2007 Property Inventory	
	Budget - Contract (08/01/2007)	IDFG Sockeye Salmon FY 2007 Line Item Budget	

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Work Element Table of Contents:

Work Element - Work Element Title	EC Needed*	Estimate	(%)
D : 157. Collect/Generate/Validate Field and Lab Data - Snake River Sockeye Salmon (SRSS) Captive Broodstock Genetic Sampling.	*	$2,000	(0 %)
E : 162. Analyze/Interpret Data - Analyze/Interpret SRSS genetic samples.		$70,000	(7 %)
F : 63. Rear Fish - Rear Juvenile SRSS at Sawtooth FH	*	$50,000	(5 %)
G : 63. Rear Fish - Rear Juvenile SRSS at Oxbow FH (ODFW)	*	$8,000	(1 %)
H : 70. Install Fish Monitoring Equipment - Install/maintain weir on Redfish Lake Creek.	*	$20,000	(2 %)
I : 158. Mark/Tag Animals - Mark SRSS for Evaluation of Program	*	$50,000	(5 %)
J : 157. Collect/Generate/Validate Field and Lab Data - Snake River Sockeye Salmon (SRSS) Captive Broodstock Field Evaluation.	*	$250,000	(23 %)
K : 159. Transfer/Consolidate Regionally Standardized Data - Submit Data to Regional Database		$2,000	(0 %)
L : 162. Analyze/Interpret Data - Analyze and Interpret SRSS Data		$70,000	(7 %)
M : 189. Regional Coordination - Quarterly SBSTOC coordination meeting and program essential meetings.		$15,000	(1 %)
N : 119. Manage and Administer Projects - Manage and Administer projects associated with the Sockeye Captive Broodstock Program		$10,000	(1 %)
O : 132. Produce (Annual) Progress Report - Submit Annual Report for the period (Jan 2006) to (Dec 2006): Research Element.		$10,000	(1 %)
P : 132. Produce (Annual) Progress Report - Submit Annual Report for the period (Jan 2006) to (Dec 2006): Hatchery Element.		$5,000	(0 %)
Q : 185. Produce Pisces Status Report - Periodic Status Reports for BPA		$1,000	(0 %)
	Total:	$1,069,958	

***** Environmental Compliance (EC) needed before work begins.

Contract Description:

The ultimate goal of the Idaho Department of Fish and Game (IDFG) Sockeye Salmon Captive Broodstock Program is to reestablish sockeye salmon runs to Sawtooth Valley waters and to provide for utilization of sockeye salmon and kokanee resources. In the near term, our goal is to maintain genetic resources unique to Snake River sockeye salmon and prevent species extinction while long-term solutions in smolt-to-adult survival are sought. The IDFG and the Stanley Basin Sockeye Technical Oversight Committee (SBSTOC) have agreed to adhere to a program of prudent broodstock management to minimize inbreeding and the potential influence of domestication. In cooperation with the IDFG Genetics staff and National Oceanic and Atmospheric Administration (NOAA) Fisheries, annual spawning designs are developed to minimize the risk of inbreeding and to maximize the distribution of genetic information across families. The SBSTOC will develop annual release plans for eyed-eggs, juveniles, and adult fish from the program.

Sockeye Salmon Captive Broodstock Program
Objectives and Tasks
1. Develop captive broodstocks from Redfish Lake sockeye salmon, culture broodstocks and produce progeny for reintroduction.

2. Determine the contribution hatchery-produced sockeye salmon make toward avoiding population extinction and increasing population abundance.

3. Describe O. nerka population characteristics for Sawtooth Valley lakes in relation to carrying capacity and broodstock program reintroduction efforts.

4. Utilize genetic analysis to discern the origin of wild and broodstock sockeye salmon to provide maximum effectiveness in their utilization within the broodstock program.

5. Transfer technology through participation in the technical oversight committee process, provide written activity reports, and participate in essential program management and planning activities.

Idaho Department of Fish and Game's participation in the Snake River Sockeye Salmon Captive Broodstock Program includes two areas of effort: 1) sockeye salmon captive broodstock culture, and 2) sockeye salmon research and evaluations.

Statement of Work Report

Work Element Details

A: 165. Produce Environmental Compliance Documentation

Title:	Sockeye Salmon Captive Broodstock Compliance Reports and Permits
Description:	Produce, submit and maintain required Environmental Compliance documentation satisfying National Environmental Policy Act (NEPA) requirements.
Deliverable Specification:	Documentation and assistance to support BPA's Environmental Compliance Group (such as maps, design drawings, survey reports, permit applications, and ESA documents). Project Permit reports include: 1120 (Project annual report), 1124 (trawling activities), 1481 (kokanee surveys) and annual herbicide usage reporting.
Planned Metrics:	Are herbicides used as part of work performed under this contract?: Yes

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Report Herbicide proposed usage to BPA Environmental lead for CY2008.	12/1/2007	2/1/2008	Completed	Provide BPA environmental lead with calendar year 2008 proposed herbicide use on form provided by BPA.
B. Report Herbicide actual usage to BPA Environmental lead for CY2007.	1/1/2008	1/31/2008	Completed	Provide BPA environmental lead with calendar year 2007 actual herbicide use on form provided by BPA.
C. Final 2007 NOAA Permit Report 1120	12/1/2007	3/31/2008	Completed	Produce final 2007 NOAA Report 1120 summarizing program activities.
D. Final 2007 NOAA Permit Report 1481	12/1/2007	3/31/2008	Completed	Produce final 2007 NOAA Permit Report 1481 summarizing kokanee fishery on Redfish Lake.
E. Final 2007 NOAA Permit Report 1124	12/1/2007	3/31/2008	Completed	Produce final 2007 NOAA permit Report 1124 summarizing trawling events on Pettit, Alturas and Redfish lakes.
Deliverable: F. NEPA compliance documentation completed and submitted.		3/31/2008	Completed	*See the Deliverable Specification above*

B: 61. Maintain Hatchery

Title: Maintain Eagle Fish Hatchery

Description: Maintain current hatchery grounds, buildings and equipment to ensure good culture environment. Provide annual herbicide usage information to BPA. Develop and maintain Eagle FH maintenance plan. Facility modifications requiring Environmental Compliance permits will have approval before implementation.

Deliverable Specification: Fully functional fish hatchery to produce quality sockeye salmon broodstock. Eagle FH will maintain equipment and structure documentation on repair and maintenance. Eagle FH will maintain and update a Hatchery Operations Manual.

Primary Focal Species: Sockeye - Snake River ESU

Country: US **NPCC Subbasin:** BOISE

State: ID **HUC5 Watershed:**

County: ADA **HUC6 Name:**

Salmonid ESUs Present: Outside legal CKSRS (Snake River Spring/Summer-run Chinook Salmon ESU) boundary (anthropogenically blocked) | Outside legal STSNR (Snake River Basin Steelhead DPS) boundary (anthropogenically blocked)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Develop and maintain a Eagle FH operation manual.	7/1/2007	6/30/2008	Completed	An Eagle FH operational manual will be maintained covering Best Management Practices for maintenance and repair of equipment and structures. This document will contain forms tracking annual maintenance and repairs completed at Eagle FH.
C. Maintain facility as needed to culture sockeye salmon captive broodstocks	7/1/2007	6/30/2008	Completed	Perform routine maintenance of hatchery buildings, grounds and equipment to ensure safe culture of captive broodstocks.
Deliverable: D. Eagle Fish Hatchery Facility and Grounds Maintenance.		6/30/2008	Completed	*See the Deliverable Specification above*

C: 176. Produce Hatchery Fish

Title: Snake River Sockeye Salmon

Description: Fish culture activities associated with maintaining a sockeye salmon captive broodstock at Eagle Fish Hatchery (Eagle FH). Fish culture activities will include spawning broodstocks, egg incubation, juvenile rearing, fish health monitoring, genetic sampling, and releasing all life stages. Environmental compliance permits will have approval before implementation.

Deliverable Specification: Incubate and transfer approximately 141,700 eyed-eggs for Brood Year 2007 production groups (Eagle FH contribution):

BY07 Eyed-egg Distribution:
> Replacement captive broodstock @ Eagle FH: 800
> Replacement captive broodstock @ Burley Creek FH: 400
> Adult Release group @ Burley Creek FH: 500
> Egg box release group to Pettit Lake: 25,000
> Pre-smolt release group @ Sawtooth FH: 90,000
> Smolt release group at Sawtooth FH: 25,000

TOTAL: 141,700

Rear Fish at Eagle Fish Hatchery for Captive Broodstock production group (Current Inventories):
> BY03: 2 (Estimated for Age-4 maturation)
> BY04: 400 (Estimated for Age -3 maturation)
> BY05: 725 (Juvenile rearing: Age 2))
> BY06: 650 (Juvenile Rearing: Age 1)
> BY07: 800 (Projected for broodstock replacement)

Spawn Fish at Eagle Fish Hatchery to produce Brood Year 2007:
> BY03: 2 (Estimated for Age-4 maturation)
> BY04: 200 (Estimated to mature in October @ Age 3)
> BY05: 10 (Estimated to mature in October @ Age 2)

Release fish to stay within current Eagle FH carrying capacities (Eagle modifications are behind schedule):
> BY04: 200 (Pre-spawn adults to release in September)
> BY06: Smolts would only be released (May 2008) if Eagle FH modifications are not completed on time.

Planned Metrics:
* Purpose of production program : Supplementation
* # eggs received into program: 800
* # fertilized eggs after shock-picking: 200000
* # eggs released from program: 141700
* # fry (button-up) produced: 760
* # juveniles received into program: 1375
* # adults into program (fish ponded): 450
* # adults released from program: 200
* # of females: 120
* # of males: 130

Primary Focal Species: Sockeye - Snake River ESU

Country:	US	**NPCC Subbasin:**	BOISE
State:	ID	**HUC5 Watershed:**	
County:	ADA	**HUC6 Name:**	

Salmonid ESUs Present: Outside legal CKSRS (Snake River Spring/Summer-run Chinook Salmon ESU) boundary (anthropogenically blocked) | Outside legal STSNR (Snake River Basin Steelhead DPS) boundary (anthropogenically blocked)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Spawn Fish: Approx. 100 pair of mature sockeye salmon captive broodstock.	8/1/2007	11/15/2007	Completed	Identify maturing sockeye salmon from BY05, BY04, and BY03 captive broodstock groups using ultrasound technology. Spawning design will be developed and approved by SBSTOC members based on genetic information. Spawn anadromous and captive sockeye salmon following approved spawning design.
C. Rear Fish: Sockeye Captive Broodstock (egg through maturation).	7/1/2007	6/30/2008	Completed	Up to 800 eyed-eggs are selected to represent each brood year of captive sockeye salmon. Typically captive sockeye salmon mature in the hatchery as three year old adults. Current inventories are as follows: BY03 - 2 BY04 - 450 BY05 - 725: and BY06 - 650
D. Trap/Collect/Hold/Transport - Hatchery: Returning Anadromous Sockeye Salmon.	7/1/2007	11/1/2007	Completed	Returning anadromous sockeye salmon are trapped in the Stanley Basin and transported to Eagle FH. Based on genetic information collected from the adults, the SBSTOC will decide if the anadromous adults will be incorporated into the hatchery spawning design or returned to the Stanley Basin and released to Redfish Lake for natural spawning.
E. Trap/Collect/Hold/Transport - Hatchery: Transport eyed -eggs for release/hatchery rearing.	11/1/2007	12/15/2007	Completed	Eyed-eggs produced at Eagle FH during FY07 will be distributed to a variety of production strategies: Up to 50,000 eyed-eggs for Pettit Lake egg box program; Up to 100,000 eyed-eggs will be transported to Sawtooth FH for pre-smolt production rearing (production goal 90,000); Up to 60,000 eyed-eggs will be transported to Sawtooth FH for smolt production rearing (production goal 50,000); Up to 70,000 eyed-eggs will be transported to Oxbow FH for smolt production rearing (production goal 60,000); and Up to 900 eyed-eggs will be transported to NOAA Fisheries (Up to 400 for replacement captive broodstock and up to 500 for adult production rearing). NOTE: Eyed-eggs are provided from NOAA Fisheries and Eagle Hatchery to meet above release and production strategies.
F. Incubate Eggs: From green egg to eyed-egg stage from Eagle FH spawning activities.	9/15/2007	12/31/2007	Completed	Incubate green eggs produced from spawning events at Eagle FH producing an estimated 141,700 eyed-eggs for distribution to Sawtooth FH, Oxbow FH, Pettit Lake egg boxes, Eagle FH captive broodstock, and NOAA Fisheries captive broodstock and adult release groups (eyed-eggs transferred to NOAA Fisheries only if they pose no disease risk to their program).
G. Incubate Eggs: Select replacement captive broodstock for Eagle FH.	9/15/2007	6/30/2008	Completed	Up to 800 sockeye salmon eyed-eggs will be selected from BY07 spawn crosses and reared to sexual maturity in captivity at Eagle FH.
Deliverable: H. Maintain and spawn captive sockeye broodstock.		6/30/2008	Completed	*See the Deliverable Specification above*

D: 157. Collect/Generate/Validate Field and Lab Data

Title: Snake River Sockeye Salmon (SRSS) Captive Broodstock Genetic Sampling.

Description: Genetic samples (fin clips) will be collected from all captive broodstock at Eagle FH (650 - 750 per brood year). Samples will be placed in 1ml vials filled with 100 % ethanol, inventoried by PIT tag number, and stored by the IDFG genetics lab until samples can be analyzed..

Deliverable Specification: Genetic samples are collected from 100% of the captive broodstock at Eagle FH. Samples collected from the BY06 sockeye broodstock will be placed in 1ml vials of 100% ethanol, inventoried by PIT tag number and transferred to the IDFG genetics lab for later analysis. Genetic samples will also be collected from returning anadromous adults to determine if these fish will be released or incorporated into the Eagle FH spawning matrix..

Planned Metrics:
* Primary R, M, and E Focal Area : Hatchery
* Primary R, M, and E Type : Project Implementation/ Compliance Monitoring
* Secondary R, M, and E Type : Status and Trend Monitoring

Primary Focal Species: Sockeye - Snake River ESU

Country: US

NPCC Subbasin: Multiple

State: ID

HUC5 Watershed:

County: Multiple **HUC6 Name:**

Salmonid ESUs Present: Outside legal CKSRS (Snake River Spring/Summer-run Chinook Salmon ESU) boundary (<multiple>) | Outside legal STSNR (Snake River Basin Steelhead DPS) boundary (<multiple>) | Snake River Basin Steelhead DPS (<multiple>) | Snake River Spring/Summer-run Chinook Salmon ESU (<multiple>)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Collect genetic samples from returning anadromous adult sockeye.	7/1/2007	9/21/2007	Completed	Collect genetic samples from all returning anadromous sockeye salmon.
C. Collect genetic samples from BY06 captive broodstock.	8/1/2007	2/1/2008	Completed	Collection of genetic samples from BY06 captive broodstock at Eagle FH.
Deliverable: D. Samples transferred to IDFG Genetics Lab for Analysis.		2/1/2008	Completed	*See the Deliverable Specification above*

E: 162. Analyze/Interpret Data

Title: Analyze/Interpret SRSS genetic samples.

Description: Genetic samples from the SRSS Captive broodstock at Eagle FH and NOAA Fisheries and genetic samples from returning anadromous sockeye adults will be analyzed by the IDFG genetics lab. Microsatellite results will be compiled in a relatedness table from which a spawning matrix can be developed.

Deliverable Specification: A spawning matrix will be developed for Eagle FH and NOAA Fisheries. The spawning matrix will be based on relatedness values between individual sockeye salmon. Every attempt will be made to make preferred crosses while maintaining equal representation of all individuals in the population.

Planned Metrics:
* Primary R, M, and E Focal Area : Hatchery
* Primary R, M, and E Type : Project Implementation/ Compliance Monitoring
* Secondary R, M, and E Type : Status and Trend Monitoring

Primary Focal Species: Sockeye - Snake River ESU

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Analyze Eagle Fish Hatchery Captive Broodstock genetic samples	7/1/2007	9/23/2007	Completed	Genetic samples from the Eagle FH maturing captive broodstock will be analyzed using microsatellite markers.
B. Analyze genetic samples of returning anadromous sockeye salmon.	7/1/2007	9/23/2007	Completed	Genetic samples from returning anadromous sockeye salmon will be analyzed using microsatellite analysis and anadromous adults will be incorporated into the Eagle FH spawning matrix or released for volitional spawning in Redfish Lake.
C. Analyze NOAA Fisheries Captive Broodstock genetic samples	7/1/2007	9/23/2007	Completed	Genetic samples from the NOAA Fisheries captive broodstock will be analyzed using microsatellite markers.
D. Interpret data to develop a spawning matrix for Eagle FH	9/24/2007	10/30/2007	Completed	Development of spawning matrix for Eagle FH.
E. Interpret data to develop a spawning matrix for NOAA Fisheries	9/24/2007	10/30/2007	Completed	Development of spawning matrix for NOAA Fisheries.
Deliverable: F. SRSS spawning matrix.		10/30/2007	Completed	*See the Deliverable Specification above*

F: 63. Rear Fish

Title: Rear Juvenile SRSS at Sawtooth FH

Description: Approximately 160,000 eyed-eggs will be transferred to Sawtooth FH for production rearing. This will result in approximately 140,000 sockeye salmon per year class at Sawtooth Fish Hatchery for release as pre-smolts (90,000) and smolts (50,000).

Deliverable Specification: Approximately 90,000 BY06 pre-smolts released in the fall of 2007. Approximately 50,000 BY06 smolts released in May of 2008. Environmental compliance requirements complete.

Planned Metrics: * Purpose of production program : Supplementation
* # juveniles received into program: 148000
* # juveniles released from program: 50000

Primary Focal Species: Sockeye - Snake River ESU

Country: US **NPCC Subbasin:** SALMON

State: ID **HUC5 Watershed:**

County: CUSTER **HUC6 Name:**

Salmonid ESUs Present: Snake River Basin Steelhead DPS (accessible) | Snake River Spring/Summer-run Chinook Salmon ESU (accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Rear Fish: BY06 juvenile sockeye rearing for pre-smolt releases to Stanley Basin lakes.	7/1/2007	10/15/2007	Completed	Rear approximately 95,000 BY06 sockeye at Sawtooth FH to meet production goal of 90,000 pre-smolts for releases in Pettit, Alturas, and Redfish lakes. Actual numbers released to each lake are based on recommendation from SBSTOC representatives.
C. Rear Fish: BY06 sockeye salmon for smolt release.	7/1/2007	5/15/2008	Completed	Rear approximately 53,000 BY06 sockeye salmon at Sawtooth FH for smolt releases in May of 2008 to Redfish Lake Creek and Salmon River near the Sawtooth FH weir.
D. Incubate Eggs: Incubate BY07 eyed-eggs for production releases.	11/15/2007	1/15/2008	Completed	Approximately 160,000 sockeye salmon eyed-eggs will be transported to Sawtooth Fish Hatchery from spawning activities at Burley Creek (NOAA Fisheries) and Eagle Hatchery (IDFG) for BY07 sockeye salmon incubation/rearing.
E. Trap/Collect/Hold/Transport Fish - Hatchery: BY06 sockeye salmon releases.	10/1/2007	5/15/2008	Completed	Transport and release BY06 pre-smolts to Pettit, Alturas, and Redfish lakes in October. Transport and release BY06 sockeye smolts to Redfish Lake Creek and the upper Salmon River in May 2008.
F. Rear Fish: BY07 juvenile production rearing for pre-smolt and smolt groups.	1/15/2008	6/30/2008	Completed	Transfer 160,000 eyed eggs from Eagle FH and Burley Creek FH spawning activities for juvenile rearing at Sawtooth FH. The BY07 production group will be transferred to Sawtooth in November and December, 2007, and will remain in rearing throughout the remaining part of this contract period. Note: This milestone is related to Milestone D above.
Deliverable: G. Pre-smolt and smolt Production at Sawtooth Fish Hatchery.		6/30/2008	Completed	*See the Deliverable Specification above*

G: 63. Rear Fish

Title: Rear Juvenile SRSS at Oxbow FH (ODFW)

Description: Approximately 70,000 sockeye salmon eyed-eggs will be transferred to Oxbow FH to meet the production goal of 60,000 smolts. The BY06 production group is currently being reared at Oxbow FH and will be released in May 2008.

Deliverable Specification: Approximately 60,000 BY06 smolts will be released to Redfish Lake Creek and Salmon River near Sawtooth Fish Hatchery weir. Environmental compliance requirements complete.

Planned Metrics: * Purpose of production program : Supplementation
* # juveniles received into program: 130000
* # juveniles released from program: 60000

Primary Focal Species: Sockeye - Snake River ESU

Country: US **NPCC Subbasin:** COLUMBIA GORGE

State: OR **HUC5 Watershed:** MIDDLE COLUMBIA/EAGLE CREEK

County: HOOD RIVER **HUC6 Name:** HERMAN CREEK

Salmonid ESUs Present: Columbia River Chum Salmon ESU (Accessible) | Lower Columbia River Chinook Salmon ESU (Accessible) | Lower Columbia River Coho Salmon ESU (Accessible) | Lower Columbia River Steelhead DPS (Accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Incubate Eggs: BY07 sockeye salmon eyed-eggs for smolt production.	11/15/2007	1/15/2008	Completed	Approximately 70,000 eyed-eggs will be transferred to Oxbow FH (ODFW) from spawning activities at Burley Creek (NOAA Fisheries) and Eagle FH (IDFG) for BY07 production rearing.
C. Rear Fish: BY06 juvenile sockeye rearing for smolt production.	7/1/2007	5/15/2008	Completed	Rear approximately 65,000 BY06 sockeye salmon juveniles to meet 60,000 smolt production goal for releases in May of 2008 to Redfish Lake Creek and Salmon River near the Sawtooth FH weir.
D. Rear Fish: BY07 juvenile sockeye rearing for smolt production.	1/1/2008	6/30/2008	Completed	Approximately 70,000 eyed-eggs will be transferred to Oxbow FH for smolt production rearing. Approximately 65,000 sockeye salmon juveniles will be reared to meet the smolt production goal of 60,000 smolts to be released in May 2009.
E. Trap/Collect/Hold/Transport Fish - Hatchery: Transport and release BY05 sockeye smolts.	4/15/2008	5/15/2008	Completed	Approximately 65,000 BY06 sockeye salmon smolts are currently being reared at Oxbow FH will be transported and released to Salmon River and Redfish Lake Creek in May 2008.
Deliverable: F. Smolt Production at Oxbow Hatchery.		6/30/2008	Completed	*See the Deliverable Specification above*

H: 70. Install Fish Monitoring Equipment

Title: Install/maintain weir on Redfish Lake Creek.

Description: Smolt out-migration produced from naturally spawning program adults or the release of hatchery-origin pre-smolts into Redfish Lake is monitored at Redfish Lake Creek trap, and adult anadromous sockeye salmon returns are monitored at Redfish Lake Creek. Environmental compliance permits will have approval before implementation.

Deliverable Specification: Installation of the adult weir on Redfish Lake Creek by 7/15/07.

Removal of adult trap/weir on Redfish Lake Creek by 11/1/07.

Installation of the smolt trap by 4/20/08 on Redfish Lake Creek.

Removal of smolt outmigration trap on Redfish Lake Creek by 6/20/08.

Primary Focal Species: Sockeye - Snake River ESU | Trout, Bull | Kokanee

Country: US **NPCC Subbasin:** SALMON

State: ID **HUC5 Watershed:**

County: CUSTER **HUC6 Name:**

Salmonid ESUs Present: Snake River Basin Steelhead DPS (accessible) | Snake River Sockeye Salmon ESU (accessible) | Snake River Spring/Summer-run Chinook Salmon ESU (accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Installation of adult weir and trap on Redfish Lake Creek	7/1/2007	7/15/2007	Completed	A weir and trap box will be installed within the existing permanent weir structure to trap adult anadromous sockeye salmon returning to Redfish lake.
C. Removal of adult weir and trap on Redfish Lake Creek.	9/1/2007	11/1/2007	Completed	The adult weir and trap box will be removed from the permanent weir structure after the anadromous sockeye salmon run is complete.
D. Installation of smolt trap/weir on Redfish Lake Creek.	4/1/2008	4/20/2008	Completed	Trap boxes will be installed in the existing permanent weir structure to monitor and evaluate sockeye salmon smolt production from naturally spawning sockeye and hatchery-reared sockeye salmon.
E. Removal of smolt monitoring trap on Redfish Lake Creek.	6/1/2008	6/20/2008	Completed	Trap boxes will be removed from existing permanent weir structure after smolt out-migration is complete.
Deliverable: F. Monitoring trap/weir in-place and fully functional.		6/20/2008	Completed	*See the Deliverable Specification above*

I: 158. Mark/Tag Animals

Title: Mark SRSS for Evaluation of Program

Description: All marking required to determine out-migration and survival estimates from different release strategies.

Deliverable Specification: Marking and tagging pre-smolts, smolts and adults to identify individual fish and to evaluate release strategies and identify captive broodstock.

BY06 Captive Broodstock: 100% PIT tagged (approximately 650 fish)
BY06 Pre-smolts: 100% ad-clipped, 3,000 PIT tagged (approximately 90,000 fish)
BY06 Smolts: 100% ad-clipped and CWT tagged, 2,000 PIT tagged (approximately 53,000)

A representative number (up to 3,000) of out-migrating smolts from Redfish Lake Creek will be PIT tagged.

Approximately ten adults released to Redfish Lake will receive radio transmitters to identify spawning behavior activities.

Summarized data containing number of PIT tagged, CWT, Radio transmitters used will also be included in annual reports (See Reporting WE L).

Planned Metrics:
* Primary R, M, and E Focal Area : Tributaries
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Project Implementation/ Compliance Monitoring

Primary Focal Species: Sockeye - Snake River ESU | Kokanee | Trout, Bull

Country: US **NPCC Subbasin:** Multiple

State: Multiple **HUC5 Watershed:** Multiple

County: Multiple **HUC6 Name:** Multiple

Salmonid ESUs Present: Columbia River Chum Salmon ESU (Accessible) | Lower Columbia River Chinook Salmon ESU (Accessible) | Lower Columbia River Coho Salmon ESU (Accessible) | Lower Columbia River Steelhead DPS (Accessible) | Outside legal CKSRS (Snake River Spring/Summer-run Chinook Salmon ESU) boundary (<multiple>) | Outside legal STSNR (Snake River Basin Steelhead DPS) boundary (<multiple>) | Snake River Basin Steelhead DPS (<multiple>) | Snake River Sockeye Salmon ESU (accessible) | Snake River Spring/Summer-run Chinook Salmon ESU (<multiple>)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Mark/Tag Animals: Anadromous returning sockeye salmon marked for individual identification.	7/1/2007	9/15/2007	Completed	All returning anadromous sockeye adults will be marked with a ziptie and PIT tag number to identify individual fish.
C. Mark/Tag Animals: BY06 sockeye salmon juvenile adipose fin marking.	9/1/2007	10/1/2007	Completed	BY06 sockeye salmon pre-smolts and smolts are adipose fin clipped before release.
D. Mark/Tag Animals: BY06 CWT of smolt release group.	9/1/2007	10/1/2007	Completed	A representative sample (up to 100%) of the BY06 sockeye salmon smolts reared at Sawtooth FH will receive coded-wire tags.
E. Mark/Tag Animals: Radio-tags used to track released adults.	9/1/2007	10/1/2007	Completed	Radio transmitters may be implanted in a representative number (6 - 10 adults) of captive reared adult sockeye salmon to monitor behavioral characteristics after release to Stanley Basin lakes.
F. Mark/Tag Animals: BY06 pre-smolts PIT tagging.	9/15/2007	2/1/2008	Completed	A representative group of BY06 sockeye salmon pre-smolts will be PIT tagged to evaluate out-migration and survival from Redfish, Pettit, and Alturas lakes.
G. Mark/Tag Animals: BY06 sockeye smolt PIT tagging (hatchery production).	3/1/2008	5/15/2008	Completed	A representative group of BY06 sockeye salmon smolts will be PIT tagged to evaluate release strategies used at individual release sites.
H. Mark/Tag Animals: Out -migrating Redfish Lake smolt PIT tagging.	4/1/2008	6/20/2008	Completed	A subsample of trapped smolts out-migrating from Redfish Lake will be PIT tagged to evaluate survival in the migration corridor
Deliverable: I. Marking/Tagging Activities Associated with Sockeye M & E.		6/30/2008	Completed	*See the Deliverable Specification above*

J: 157. Collect/Generate/Validate Field and Lab Data

Title: Snake River Sockeye Salmon (SRSS) Captive Broodstock Field Evaluation.

Description: Research to collect data to evaluate sockeye salmon production in the Sawtooth Valley. Research will include smolt outmigration monitoring and evaluation, Oncorhynchus nerka (O. nerka) creel surveys on Redfish Lake, predator (bull trout) surveys, trawl surveys in nursery lakes, and residual and adult sockeye spawning surveys on Redfish Lake. Environmental compliance permit will have approval before implementation.

Deliverable Specification: Collected data for smolt outmigration O. nerka creel surveys, predator surveys identifying bull trout numbers and spawning in Fish Hook Creek, spawning surveys identifying spawning location, timing and number of sockeye redds developed in Redfish Lake, and trawl surveys to estimate O. nerka abundance in Redfish, Alturas and Pettit lakes. will be presented at SBSTOC meetings and summarized data will be included in annual reports (See Reporting WE L).

Planned Metrics:
* Primary R, M, and E Focal Area : Tributaries
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Project Implementation/ Compliance Monitoring

Primary Focal Species: Sockeye - Snake River ESU | Kokanee | Trout, Bull

Country: US **NPCC Subbasin:** SALMON

State: ID **HUC5 Watershed:**

County: Multiple **HUC6 Name:**

Salmonid ESUs Present: Snake River Basin Steelhead DPS (accessible) | Snake River Sockeye Salmon ESU (accessible) | Snake River Spring/Summer-run Chinook Salmon ESU (accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	7/1/2007	7/1/2007	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Collect/Generate Validate Field and Lab Data: O. nerka creel survey.	7/1/2007	9/1/2007	Completed	Annual O. nerka creel surveys are conducted on Redfish Lake to estimate O. nerka (kokanee) harvest and to evaluate incidental take of sockeye salmon. Genetic samples are collected from creeled O. nerka (kokanee) and sent to IDFG's Eagle Fish Genetics Lab for genetic analysis.
C. Trap anadromous adult sockeye	7/1/2007	9/30/2007	Completed	Returning anadromous sockeye salmon are trapped at a weir on Redfish Lake Creek or a weir on the Salmon River at the Sawtooth FH. Adults that are trapped are held at the Sawtooth Fish Hatchery and transferred to the Eagle FH. Genetic samples are collected from all anadromous adult returns and transferred to IDFG's Eagle Fish Genetics Lab for real-time genetic analysis. Results from the genetic analysis assist in determining the disposition of each adult (e.g. utilized in hatchery spawn crosses or released into Redfish Lake for volitional spawning).
D. Collect/Generate Validate Field and Lab Data: Bull trout spawning surveys.	8/1/2007	10/1/2007	Completed	Annual bull trout surveys are conducted on index reaches established in Fishhook Creek and Alpine Creek. Bull trout readily consume O. nerka and other salmonids, therefore, population trends are monitored.
E. Collect/Generate Validate Field and Lab Data: Trawling surveys.	9/1/2007	10/15/2007	Completed	Annual trawl surveys are conducted in Redfish, Pettit and Alturas lakes to estimate O. nerka abundance. These estimates are coupled with the Shoshone-Bannock Tribe's limnological work and hydroacoustic estimates to estimate carrying capacity of program lakes. We use the carrying capacity estimates to guide our sockeye salmon reintroduction efforts. Fork length and weight are recorded for all trawl-captured O. nerka. Sagittal otoliths and scales are removed from subsample of O. nerka to determine ages. Tissue samples are collected and sent to IDFG's Eagle Fish Genetics Lab for future analysis. Stomachs are removed for diet composition analysis conducted by the Shoshone -Bannock Tribe. Heads are removed and submitted to the IDFG's Eagle Fish Health Lab for whirling disease testing. Whole fish are frozen and sent to the U of I for proximate analysis.
F. Collect/Generate Validate Field and Lab Data: Sockeye spawning ground surveys.	9/15/2007	11/15/2007	Completed	Weekly surveys are conducted by boat to enumerate redd construction and to monitor behavior of captive reared and anadromous sockeye salmon released to spawn volitionally.
G. Collect/Generate Validate Field and Lab Data: Out-migrating sockeye smolt surveys.	4/1/2008	6/20/2008	Completed	Out-migration and survival estimates for smolts from Redfish Lake are determined by running the juvenile out-migration trap on Redfish Lake Creek. Smolts originate from pre-spawn program adults released to spawn volitionally and from program fall releases of pre-smolts. A sample of smolts that are captured are PIT tagged for evaluation of survival in the migration corridor. Fork length and weight are recorded for a subsample of trapped sockeye salmon. Sagittal otoliths and scales are removed from a subsample of sockeye salmon to determine ages. Tissue samples are collected and sent to IDFG's Eagle Fish Genetics Lab for future analysis. A subsample of trapped sockeye salmon are frozen and sent to the U of I for proximate analysis. A subsample of trapped sockeye salmon are culled for fish health sampling by the IDFG Fish Health Laboratory.
Deliverable: H. Collection of Field Data associated with Sockeye M & E.		6/20/2008	Completed	*See the Deliverable Specification above*

K: 159. Transfer/Consolidate Regionally Standardized Data

Title: Submit Data to Regional Database

Description: Annual PIT tag information is submitted to the regional PTAGIS database for use in the creation of downstream interrogation files and survival estimates.

Deliverable Specification: PIT tagging and CWT data will be updated to PTAGIS and RMIS databases.

BY06 Pre-smolt release group:
Approximately 3,000 PIT tags uploaded to database in October

BY06 Smolt release group:
Approximately 50,000 CWT in September and information uploaded to database.
Approximately 2,000 PIT tagged in April, 2008 and information uploaded to database.

Out-migrating smolts from Redfish Lake:
A representative group of out-migrating smolts will be PIT tagged in April - June, 2008 and information uploaded to database.

Primary Focal Species: Sockeye - Snake River ESU | Trout, Bull

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Submit BY06 presmolts PIT tagging data	9/15/2007	10/15/2007	Completed	A representative group of pre-smolts will be PIT tagged to evaluate out-migration and survival from Redfish, Pettit and Alturas lakes. The PIT tag information will be uploaded to the regional PTAGIS database.
B. Submit BY06 coded wire tag (CWT) data	10/1/2007	6/15/2008	Completed	A representative group (up to 100%) of smolts will be CWT to evaluate smolt to adult survival. CWT data will be submitted to RMIS.
C. Submit BY06 smolt PIT tagging data	4/1/2008	5/15/2008	Completed	A representative group of smolts will be PIT tagged to evaluate release strategies used at individual release sites. The PIT tag information will be uploaded to the regional PTAGIS database.
D. Submit migration year 2007 outmigrant PIT tagging data	4/1/2008	6/20/2008	Completed	A subsample of trapped smolts out-migrating from Redfish Lake will be PIT tagged to evaluate survival in the migration corridor. The PIT tag information will be uploaded to the regional PTAGIS database.
Deliverable: E. Update Regional Databases.		6/20/2008	Completed	*See the Deliverable Specification above*

L: 162. Analyze/Interpret Data

Title: Analyze and Interpret SRSS Data

Description: Statistical analysis of data collected during field activities (smolt outmigration, O. nerka creel surveys, trawl surveys, adult returns, predator surveys and adult spawning surveys) is used to make project/program management decisions and is reported in the 2007 BPA Annual Report-Research Element and SBSTOC updates.

Deliverable Specification: Summarized data (smolt outmigration, O. nerka creel surveys, trawl surveys, adult returns, predator surveys and adult spawning surveys) will be presented at SBSTOC meetings and project/program management decisions will be made by the SBSTOC representatives. Summarized data will also be included in annual reports (See Reporting WE L).

Planned Metrics:
* Primary R, M, and E Focal Area : Tributaries
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Project Implementation/ Compliance Monitoring

Primary Focal Species: Sockeye - Snake River ESU | Kokanee | Trout, Bull

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Analyze smolt outmigration data from Redfish Lake and migration corridor survival	7/1/2007	3/31/2008	Completed	Out-migration and survival estimates for smolts from Redfish Lake are determined by running the juvenile out-migration trap on Redfish Lake Creek. Smolts originate from pre-spawn program adults released to spawn volitionally and from program fall releases of presmolts. Outmigration and survival estimates are compared statistically between release strategies and between Redfish, Pettit and Alturas lakes. A sample of smolts that are captured are PIT tagged and used to develop migration corridor survival estimates. Survival to Lower Granite dam is compared statistically between fish of different release strategies and from Redfish, Pettit and Alturas lakes. We use this data to make management decisions regarding the contribution of program fish to recovery.
B. Analyze annual O. nerka creel survey data conducted on Redfish Lake	7/1/2007	3/31/2008	Completed	Annual O. nerka creel surveys are conducted on Redfish Lake to statistically estimate O. nerka (kokanee) harvest and to evaluate incidental take of sockeye salmon. We use this data to manage the O. nerka (kokanee) fishery on Redfish Lake.
C. Analyze annual trawl surveys conducted in program nursery lakes	9/1/2007	3/31/2008	Completed	Annual trawl surveys are conducted in Redfish, Pettit and Alturas lakes to estimate O. nerka abundance. These estimates are coupled with the Shoshone-Bannock Tribe's limnological work and hydroacoustic estimates to estimate carrying capacity of program lakes. We use the carrying capacity estimates to guide our sockeye salmon reintroduction efforts and to make management decisions.
D. Analyze genetic samples collected from O. nerka in Sawtooth Basin.	7/1/2007	6/30/2008	Completed	Approximately 800 O. nerka genetic samples will be analyzed using microsatellite markers at 11 Loci. Genetic samples will be collected from juveniles outmigrating from Pettit, Alturas, and Redfish lakes, from genetic samples collected from trawling activities, and from O. nerka (kokanee) spawners in Alturas Lake. Results will be analyzed to evaluate success of different release strategies by assigning outmigrating smolts to release strategy or in-lake spawning activities.
Deliverable: E. Analyzed data collected from Monitoring and Evaluation activities.		6/30/2008	Completed	*See the Deliverable Specification above*

M: 189. Regional Coordination

Title: Quarterly SBSTOC coordination meeting and program essential meetings.

Description: Participation in program essential meetings, program reviews, symposiums, etc as requested by BPA, Program partners, Northwest Power and Conservation Council, and Columbia Basin Fish and Wildlife Authority. SBSTOC meetings are held at least four times per year. Participants provide written material (exhibits) that are discussed during the SBSTOC meetings. Minutes are kept of the meeting. The minutes plus the exhibits are the deliverable and document program status and are a basis for planning and coordination of program activities.

Deliverable Specification: Representatives from IDFG: Eagle Hatchery and Sockeye Research, NOAA Fisheries, Shoshone-Bannock Tribal Biologists, and BPA COTR's meet approximately bi-monthly summarizing recent program activities and upcoming activities, report on program implementation progress and issues, and achieve consensus on program implementation. Draft summary of the minutes will be approved at the following meeting. IDFG biologists will attend program essential meetings as required.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. First Quarter SBSTOC coordination meeting (July - September).	7/1/2007	9/30/2007	Completed	Summaries of program activities provided to SBSTOC participants through E-mail and hard copies at the meeting covering activities since last meeting. Approved Draft of minutes from previous meeting.
B. Second quarter SBSTOC coordination meeting (October - December).	10/1/2007	12/31/2007	Completed	Summaries of program activities provided to SBSTOC participants through E-mail and hard copies at the meeting covering activities since last meeting. Approved Draft of minutes from previous meeting.
C. Third quarter SBSTOC coordination meeting (January - March).	1/1/2008	3/31/2008	Completed	Summaries of program activities provided to SBSTOC participants through E-mail and hard copies at the meeting covering activities since last meeting. Approved Draft of minutes from previous meeting.
D. Fourth quarter SBSTOC coordination meeting (April - June).	4/1/2008	6/30/2008	Completed	Summaries of program activities provided to SBSTOC participants through E-mail and hard copies at the meeting covering activities since last meeting. Approved Draft of minutes from previous meeting.
E. Participation in Program essential meetings.	7/1/2007	6/30/2008	Completed	IDFG biologists will participate in program essential meetings, program reviews, symposiums, etc. at the request of BPA and/or program partners.
Deliverable: F. Attendance at Program Essential and SBSTOC meetings.		6/30/2008	Completed	*See the Deliverable Specification above*

N: 119. Manage and Administer Projects

Title: Manage and Administer projects associated with the Sockeye Captive Broodstock Program

Description: Manage on the ground execution of contract including administrative work in support of on the ground efforts to support BPA's programmatic requirements such as metric reporting, financial reporting and development of SOW package. Attend training and professional conferences following guidelines outlined in BPA Contracting Manual.

Deliverable Specification: BPA project administration requirements which includes: Contract Package (SOW, budget, spending plan, and property inventory), Metrics, Focal Species, and Locations report, Financial Income Report, and Accrual Reports. All listed requirements will be completed by milestone due dates. Training associated with completing BPA project requirements as outlined in BPA Contracting Manual.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Attend training and professional development classes following BPA Contracting Manual guidelin	7/1/2007	6/30/2008	Completed	Training and professional development will be pursued following guidelines outlined in BPA Contracting Manual. All training will be program releated and may include fish genetics workshops, fish disease workshops, fish nutrition workshops, Pisces/Budget training, and CPR/First Aide certification. Professional development may include the Northwest Fish Culture Conference, the Idaho Chapter of American Fisheries Society, and the National Chapter of American Fisheries Society in San Francisco.
B. Submit FY07 accrual: September estimate.	7/1/2007	9/30/2007	Completed	Provide BPA with an estimate of contract work that will occur prior to September 30 but will not be billed until October 1 or later. Generally, this should be done by September 10.
C. Submit FY08 draft SOW and budget package.	2/1/2008	3/31/2008	Completed	FY08 SOW/budget will be submitted to BPA and SOW uploaded in Pisces system by April 1, 2008.
D. Funding Package - Conduct internal review (e.g., Supervisor or Interagency)	3/1/2008	3/31/2008	Completed	Submit FY08 SOW and Budget for internal contractor review before submitting to BPA. Assuming this review takes 30 days, start this milestone 120 days before the end of the current contract.
E. Develop and maintain inventory of Eagle FH/Research equipment and buildings.	3/1/2008	3/31/2008	Completed	An annual equipment and building inventory will be updated and provided with FY08 contract procurement package.
F. Identify equipment and maintenance requirements in SOW.	3/1/2008	3/31/2008	Completed	Facility maintenance projects will be indentified in FY08 SOW.
Deliverable: G. Manage and Administer BPA project.		6/30/2008	Completed	*See the Deliverable Specification above*

O: 132. Produce (Annual) Progress Report

Title: Submit Annual Report for the period (Jan 2006) to (Dec 2006): Research Element.

Description: The annual report summarizes the project goal, objectives, hypotheses, completed and uncompleted deliverables, problems encountered, lessons learned, and long-term planning. Examples of long-term planning include future improvements, new directions, or level of effort for contract implementation, including any ramping up or ramping down of contract components or of the project as a whole. The COTR and contractor have agreed that the Progress Report will cover activities within each calendar year. The Progress Report covering activities from Jan 2006 to Dec 2006 will be finalized and submitted/uploaded following BPA report guidelines. A Draft Progress Report will be completed covering activities for Calendar Year 2007.

Deliverable Specification: Upload annual report for the period Jan 2006 to Dec 2006 covering Sockeye Research activities. A Draft progress report covering Sockeye Research activities for the period Jan 2007 to Dec 2007 will start final review process.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Review annual report format requirements	11/1/2007	12/1/2007	Completed	Review progress report formatting before beginning calendar year 2007 report (Research Element).
B. Submit Draft Progress Report covering activities from Jan 2007 to Dec 2007 for internal review	1/1/2008	3/31/2008	Completed	A Draft 2007 Progress Report will be reviewed internally by IDFG sockeye staff and edits will be incorporated.
C. Email draft of report to COTR for review	4/1/2008	4/1/2008	Completed	The draft 2007 Progress report will be submitted to the BPA COTR in Microsoft Word format (any version of Word is fine).
D. Receive COTR review comments	4/1/2008	4/30/2008	Completed	The BPA COTR will provide review feedback and comments within 30 days of receiving the draft annual report.
E. Submit 2007 Progress Report for external review.	4/1/2008	6/30/2008	Completed	The Draft 2007 Progress Report will begin IDFG external review process.
F. Finalize 2006 Progress Report.	7/1/2007	9/30/2007	Completed	Integrate review feedback and comments, and obtain internal signatures if necessary. Convert the annual report to Adobe Acrobat PDF format and upload into Pisces.
G. Confirm BPA posting of the 2006 Progress Report: Research Element.	10/1/2007	10/31/2007	Completed	Confirm posting of the Final 2006 Progress Report covering Research activities from Jan 2006 to Dec 2006, by searching the BPA Publications database at the following website: http://www.efw.bpa.gov/Integrated_Fish_and_Wildlife_Program/technicalreports.aspx
Deliverable: H. Final report uploaded to the BPA website: Research Element		6/30/2008	Completed	*See the Deliverable Specification above*

P: 132. Produce (Annual) Progress Report

Title: Submit Annual Report for the period (Jan 2006) to (Dec 2006): Hatchery Element.

Description: The annual report summarizes the project goal, objectives, hypotheses, completed and uncompleted deliverables, problems encountered, lessons learned, and long-term planning. Examples of long-term planning include future improvements, new directions, or level of effort for contract implementation, including any ramping up or ramping down of contract components or of the project as a whole. The COTR and contractor have agreed that the Progress Report will cover activities within each calendar year. The Progress Report covering activities from Jan 2006 to Dec 2006 will be finalized and submitted/uploaded following BPA report guidelines. A Draft Progress Report will be completed covering activities for Calendar Year 2007.

Deliverable Specification: Upload annual report for the period Jan 2006 to Dec 2006 covering Sockeye Hatchery activities. A Draft progress report covering Sockeye Hatchery activities for the period Jan 2007 to Dec 2007 will start final review process.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Review annual report format requirements	11/1/2007	12/1/2007	Completed	Review progress report formatting before beginning calendar year 2007 report (Hatchery Element).
B. Submit Draft Progress Report covering activities from Jan 2007 to Dec 2007 for internal review	1/1/2008	3/31/2008	Completed	A Draft 2007 Progress Report will be reviewed internally by IDFG sockeye staff and edits will be incorporated.
C. Email draft of report to COTR for review	4/1/2008	4/1/2008	Completed	The draft 2007 Progress report will be submitted to the BPA COTR in Microsoft Word format (any version of Word is fine).
D. Receive COTR review comments	4/1/2008	4/30/2008	Completed	The BPA COTR will provide review feedback and comments within 30 days of receiving the draft annual report.
E. Submit 2007 Progress Report for external review.	4/1/2008	6/30/2008	Completed	The Draft 2007 Progress Report will begin IDFG external review process.
F. Finalize 2006 Progress Report.	7/1/2007	9/30/2007	Completed	Integrate review feedback and comments, and obtain internal signatures if necessary. Convert the annual report to Adobe Acrobat PDF format and upload into Pisces.
G. Confirm BPA posting of the 2006 Progress Report: Hatchery Element.	10/1/2007	10/31/2007	Completed	Confirm posting of the Final 2006 Progress Report covering Hatchery activities from Jan 2006 to Dec 2006, by searching the BPA Publications database at the following website: http://www.efw.bpa.gov/Integrated_Fish_and_Wildlife_Program/technicalreports.aspx
Deliverable: H. Final report uploaded to the BPA website: Hatchery Element		6/30/2008	Completed	*See the Deliverable Specification above*

Q: 185. Produce Pisces Status Report

Title: Periodic Status Reports for BPA

Description: The Contractor shall report on the status of milestones and deliverables in Pisces. Reports shall be completed either monthly or quarterly as determined by the BPA COTR. Additionally, when indicating a deliverable milestone as COMPLETE, the contractor shall provide metrics and the final location (latitude and longitude) prior to submitting the report to the BPA COTR.

Deliverable Specification:

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Jul-Sep 2007 (7/1/2007 - 9/30/2007)	10/1/2007	10/15/2007	Completed	
B. Oct-Dec 2007 (10/1/2007 - 12/31/2007)	1/1/2008	1/15/2008	Completed	
C. Jan-Mar 2008 (1/1/2008 - 3/31/2008)	4/1/2008	4/15/2008	Completed	
D. Final Apr-Jun 2008 (4/1/2008 - 6/30/2008)	6/16/2008	6/30/2008	Completed	

COOPERATIVE AGREEMENT
between the
U.S. FISH AND WILDLIFE SERVICE
and
IDAHO DEPARTMENT OF FISH AND GAME

FWS Agreement No.: 141109J008
Charge Code: 14110-1936-0030
Amount Obligated: $896,174.00
Recipient Tax Identification No.: 82-6000952
DUNS No.: 825201510
CFDA No.: 15.FFA

I. TYPE OF AGREEMENT:

___ Grant
_X_ Cooperative Agreement
___ Fire Agreement

II. TYPE OF ORGANIZATION:

_X_ State, Local or Indian Gov.
___ Non-Profit Organization
___ Higher Education Inst.
___ Private Individual
___ Business Organization

III. PARTICIPANTS:

Funding Organization:
U.S. Fish and Wildlife Service
Lower Snake River Compensation Plan
1387 S. Vinnell Way, Suite 343
Boise, ID 83709

Recipient Organization:
Idaho Department of Fish and Game
P.O. Box 25
Boise, ID 83707

IV. PROJECT OFFICERS:

FWS Officer:
Name: Scott Marshall
Title: LSRCP Coordinator
Phone: (208)378-5321
E-Mail: scott_marshall@fws.gov

Recipient Officer:
Name: Dan Schill
Title: Fisheries Research Supervisor
Phone: (208)334-3791
E-Mail: dschill@idfg.state.id.us

V. PURPOSE:

A. Background

1. The Lower Snake River Fish and Wildlife Compensation Plan (hereinafter referred to as the LSRCP), Washington and Idaho, was approved by the Water Resources Development Act of 1976, PL 94-587, Section 102, 94th Congress substantially in accordance with the Special Report LSRCP, dated June 1975 on file with the Chief of Engineers.

2. The LSRCP was prepared and submitted in compliance with the Fish and Wildlife Coordination Act of 1958, PL 85-624, 85th Congress, August 12, 1958 to mitigate for the losses of fish and wildlife caused by the construction of dams on the lower Snake River.

3. The Secretary of the Army, acting through the Chief of Engineers, was authorized to implement the LSRCP and to construct Hagerman, Dworshak Expansion, McCall, Magic Valley, Sawtooth, and Clearwater fish hatcheries and five satellite facilities in Idaho. Upon completion, the Secretary of the Army was authorized to turn ownership of these hatcheries and satellite facilities over to the U.S. Fish and Wildlife Service (hereinafter referred to as the Service), or to the National Marine Fisheries Service, for the purpose of providing funds for operation and maintenance of the hatcheries and their satellites to the appropriate State agency. The Service and the National Marine Fisheries Service agreed the Service would bear the responsibility of administering the LSRCP under the authorized legislation.

B. Objective

This Cooperative Agreement is established to facilitate the cooperation of the Service and the Idaho Department of Fish and Game (hereafter referred to as the Recipient) in accomplishing the purposes and objectives of the LSRCP within the State of Idaho. It provides for specified interchange of services, personnel, equipment, facilities and funds in order to accomplish LSRCP objectives through monitoring and evaluating:

1. fish production at and distribution from LSRCP facilities in Idaho;

2. adult fish returning to Idaho which were produced at LSRCP facilities in past years; and

3. wild or natural stocks (and their habitats) which have or will have an effect on achieving the LSRCP program objectives.

VI. AUTHORITY:

The Service enters into this agreement under the authority of the Water Resources Development Act of 1976 and the Fish and Wildlife Coordination Act, 16 USC 661-6661, (1958).

VII. FUNDING INFORMATION:

A. Budget

The budget for this program is contained in Attachment No. 1.

B. Availability of Funds

Nothing herein shall be considered as obligating the Service to expend funds or otherwise obligate the Service for the future payment of money in excess of funding specified in the Service/Bonneville Power Administration (BPA) LSRCP Memorandum of Agreement (MOA) or appropriations authorized by law and administratively allocated for the activities associated with this agreement.

VIII. TERM OF AGREEMENT:

This agreement will become effective on date of the last signature and continue through September 30, 2009.

IX. SPECIFIC OBLIGATIONS OF EACH PARTY:

A. The Service will:

1. Provide funds to the Recipient in the amount of $896,174 for evaluating and monitoring of the LSRCP Program in Idaho from October 1, 2008 through September 30, 2009 in accordance with the Statement of Work attached to this document (Attachment No. 2).

2. Provide the Recipient with budgetary approval by September 15, 2008 or as soon as the 2009 Service/BPA MOA funding has been completed or necessary Congressional budget action permits, for their approved FY2009 program.

3. Review the Recipient's individual evaluation study proposal(s) for 2010 and overall evaluation program to assure the intent of the LSRCP is being met and to facilitate better coordination with other projects funded by the LSRCP program and by other Columbia River Basin Programs.

4. Review Recipient's budget requests for 2010 funding for accuracy, appropriateness, and adequacy and incorporate these requests into a LSRCP FY2010 budget package.

5. Physically inspect all Service-owned equipment as deemed necessary. A current property list is attached (Attachment No. 3). Updated lists will be provided as necessary.

6. Conduct at least two coordination meetings each year to review and provide recommendations regarding LSRCP evaluation programs. Consult with the Recipient during the year as needed.

7. Review drafts of all study reports and provide comments and recommendations within three weeks of their receipt from the Recipient.

8. Review and provide written approval for any major project changes, as described in Article XV. A. of this agreement.

9. Attend Idaho AOP meeting as needed to develop annual hatchery operation plans to meet LSRCP Program needs.

10. Assemble all information and documents necessary for any outside LSRCP reviews (e.g. review by the Independent Science Review Panel).

B. The Recipient shall:

1. Provide all supervisory program planning, coordination, evaluation study oversight, and supervision.

2. Furnish all services, labor, materials, tools, and replacement equipment necessary to conduct the evaluation studies in accordance with the Statement of Work described in Attachment No. 2.

3. Comply with all provisions of the Endangered Species Act (ESA) and provide the Service with any documentation needed to complete, and to participate as required in conducting any informal or formal consultations under Section 7 of the ESA. In addition the Recipient agrees to comply with provisions of Section 10 and/or 4(d) of the ESA by acquiring scientific or enhancement permits necessary to operate under provisions of the ESA. Copies of all Section 10 permit applications and authorized permits for LSRCP-funded activities will be provided to the LSRCP Office.

4. Notify the Service of the need to modify the production program at LSRCP facilities based on results of evaluation studies.

5. Maintain all evaluation study equipment in a manner satisfactory to the Service (see Attachments No. 3).

6. Maintain an inventory of all Service-owned personal property and equipment delivered to or acquired by the Recipient and establish, maintain and furnish property accountability records according to Federal Government procedures for property accountability.

Provide the Service with proper documentation of purchases of accountable property items as it is acquired during the fiscal year.

7. Cooperate with and assist Service personnel in conducting an annual physical inventory of all capitalized personal property.

8. Attend Idaho AOP meeting to develop annual hatchery operation plans to meet LSRCP Program needs.

9. Provide all information and documents necessary for any outside LSRCP reviews (e.g. review by the Independent Science Review Panel), including assistance in assembling information.

10. Submit all deliverables in Section X as specified.

X. DELIVERABLES/PROGRESS REPORTS:

A. Financial Reports

Furnish to the Service's Project Officer a financial status report on the outlays and obligations for each budget item category (see subtotals columns of budget in Attachment No. 1). These reports are required quarterly, and a final report is required within 90 days after completion of the current fiscal year.

B. Proposals and Budgets

1. Submit to the Service's Project Officer not later than June 1, 2009, proposals and budgets for all FY2010 evaluation studies to begin October 1, 2009.

2. By February 1, 2009, be prepared to discuss 3-year study plans for FY2010 through FY2012, providing preliminary proposals if necessary, and estimate budget needs for FY2013 and FY2014. All budgets will be based on current year price levels and must provide sufficient detail to justify all expenditures. The budgets will be submitted electronically in a form provided by the Service.

C. Study Results

1. Furnish the Service an annual report in PDF format on the studies described in Attachment No. 2, discussing the activities and findings on each objective and sub-objective listed and making recommendations where required. A first draft report will be provided to the LSRCP Office for review on December 31, 2009.

2. This study shall be accomplished in accordance with the following schedule:

Quarterly Activity Report	10th day after end of quarter
Initiation of project	October 1, 2008
Submit proposal for FY2010	July 1, 2009
Completion of field work	September 30, 2009
2006-2007 Annual Steelhead Evaluation Studies Report	September 30, 2009
2006-2007 Annual Chinook Salmon Evaluation Studies Report	September 30, 2009
NATURES rearing completion Report	September 30, 2009
Upper Salmon River B-run Steelhead Monitoring and Evaluation Report	September 30, 2009
2004-2005 Steelhead Harvest Monitoring Program Annual Report	September 30, 2009
2006-2007 Steelhead Harvest Monitoring Program Annual Report	September 30, 2009

3. Furnish the reports in PDF format along with one (1) hard copy to the LSRCP office, Boise. Reports will be published on the LSRCP website.

XI. INVOICING/ACCEPTANCE PROCEDURES:

A. Recording and Documentation of Receipts and Expenditures

General accepted accounting procedures must be used to provide an accurate and timely recording of receipts of funds by source, of expenditures made from such funds, and of unexpended balances. Recipient shall certify expenditures charged to this agreement are for allowable purposes and, when requested, will provide documentation verifying charges made are accurate.

B. Access to Records and Rights to Audit

The Recipient agrees the Controller General of the United States or any duly authorized representative shall, for a period of three years following expenditures of all funds under this agreement, have access to and the right to examine any Recipient books, documents, and records involving all transaction related to this Agreement. The Recipient agrees to include the substance of this paragraph into all sub-agreements and other transactions payable from funds provided, in whole or in part by this Agreement.

The Recipient agrees payments made under this Cooperative Agreement shall be subject to reduction for amounts charged to this agreement, which are found on the basis of audit

examination to be unallowable costs under this agreement. The Recipient shall refund, by check payable to the United States Department of Interior, U.S. Fish and Wildlife Service, the amount of such reductions of payments under completed or terminated agreements.

C. Method of Payment

1. Upon acceptance of the terms and conditions of this agreement, the Recipient will submit requests for payment no more frequently than monthly to the Service in a format mutually agreeable to the party(s). The invoices shall be presented in original and one copy and shall be supported by such evidence of costs incurred. Payments will be made on the basis of acceptable documentation presented for work accomplished including the Draft Final Report, and the Final Report, during the life of this agreement. Ten percent of the total amount of the agreement may be withheld until all requirements of the agreement are accomplished.

2. Requests shall be submitted to the Cooperative Agreement Specialist, at the following address:

Margaret Anderson
Lower Snake River Comp. Plan
1387 S. Vinnell Way, Suite 343
Boise, ID 83709

3. The Recipient shall keep accounting records of all expenditures and costs incurred in carrying out the provisions of this agreement, in a manner satisfactory to the Service, and shall, insofar as practicable, keep those records separate from its other work and itemized to support the itemization shown on the invoices.

4. Should the Recipient be unable to complete the provisions of this agreement, all monies provided by the Service which prove to be cancelable obligations or unallowable in accordance with applicable administrative and cost principle regulations (as referenced in the "Applicable Regulations" Section of this agreement) or the approved budget, shall be refunded to the Service.

XII. APPLICABLE REGULATIONS:

A. The Recipient must submit with this agreement Standard Form 424 - Application for Federal Assistance and Standard Form 424B - Assurances Non-Construction Programs (Attachment No. 4). In addition to the assurances listed on Standard Form 424B, the Recipient certifies compliance with the following regulations, as applicable, incorporated by reference with the same force and effect as if they were provided in full text. Failure of a recipient to comply with any provision may be the basis for withholding payments for proper charges made by the recipient and for termination of support.

1. OMB Circular A-102, Grants and Cooperative Agreements with State and Local Governments as codified at 43 CFR Part 12, Subpart C

2. OMB Circular A-110, Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations as codified at 43 CFR Part 12, Subpart F

3. OMB Circular A-21, Cost Principles for Educational Institutions

4. OMB Circular A-87, Cost Principles for State, Local, and Indian Tribal Governments

5. OMB Circular A-122, Cost Principles for Non-Profit Organizations

6. OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations

7. 43 CFR Part 12, Subpart D – Government wide Debarment and Suspension (Non-procurement) and Government wide Requirements for Drug Free Workplace

8. 43 CFR Part 12, Subpart E – Buy American Requirements for Assistance Programs.

9. 43 CFR Part 18 – New Restrictions on Lobbying

10. 48 CFR Part 31.2 - Contracts with Commercial Organizations

11. 48 CFR Part 52.215.2 - Audit and Records - Negotiation

Copies of the above documents are available at the following websites:
http://www.whitehouse.gov/OMB/circulars/index.html or www.doi.gov/pam/pamfaeg.html

B. Small Business Policy
Reference 505 DM 3.5 C(1)(a):

It is a National policy to award a fair share of contracts to small and minority business firms. The Department of the Interior is strongly committed to the objectives of this policy and encourages all recipients of its grants and cooperative agreements to take affirmative steps to ensure such fairness.

1. The grantee and subgrantee shall take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

2. Affirmative steps shall include:

(i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(ii) Assuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;

(iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;

(iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;

(v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce as appropriate, and

(vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in (2)(I) through (v) above.

XIII. TERMINATION:

This agreement may be terminated by any party within 90 days of written notification to other party(s).

XIV. MODIFICATION PROCEDURES:

Modifications to this Agreement may be proposed by either party and shall become effective upon written concurrence of all parties. Work completed prior to approval of a modification is done at the Recipient's risk, without expectation of reimbursement.

XV. SPECIAL PROVISIONS:

A. Approval of Changes

The Recipient must obtain prior written approval from the Service for major project changes. These changes will be incorporated into the agreement by means of a written

modification issued by the Service and signed by both parties (see Section XIV). These include changes of substance in project activities, and changes in the amount of any approved budget subtotal category that will exceed the grand totals by 5% (see subtotal column of the budget in Attachment 1). Moreover, the Service is to be notified when the overall total amount of Federal funds authorized under this agreement is expected to exceed the Recipient's needs by more than five percent. **In no event, shall the Recipient's expenditures exceed the total dollar amount stipulated in Section VII. A.**

In circumstances where time for a written change is not feasible, requests for changes may be transmitted orally. However, all oral requests must be confirmed by a written request by Recipient with pertinent information as soon as possible. All oral approvals by the Service will be followed by written approval via issuance of a modification within 20 days.

B. Public Relations

The Recipient shall assume the lead in all public relations. **All communications directed at the public or scientific community shall include comments indicating that the evaluation and monitoring program is funded entirely by the United States Government as part of the compensation for the adverse affects of the Lower Snake River Hydroelectic Dam Projects.**

C. Other Nonconflicting Use of the Hatchery

Any use of federal property or facilities not related to the Lower Snake River Compensation Programs must have written approval of the Service, must be in accordance with applicable State fish disease and other appropriate State policies and regulations, and must be at no cost to the Government. It is anticipated that during the collection of field data the Recipient will collect samples and data for other State fishery management programs at no cost to the Service; such usage shall not conflict with or impair that of the evaluation study programs in Idaho.

D. Release of Claims

The Service and its officers and employees will not be liable in any manner to the Recipient for or due to damage in connection with the performance of work under this cooperative agreement. To the extent that it may legally do so, the Recipient hereby releases the Service and agrees to hold it free and harmless and to indemnify it from all damages, claims, or demands that may result from the monitoring and evaluation program.

E. Seat Belt Policies and Programs

Recipients of grants/cooperative agreements and/or sub-awards are encouraged to adopt and enforce on-the-job seat belt use policies and programs for their employees when operating company-owned, rented, or personally-owned vehicles. These measures include, but are not

limited to, conducting education, awareness, and other appropriate programs for their employees about the importance of wearing seat belts and the consequences of not wearing them.

F. Greening Policies and Programs

In accordance with Executive Order 13101 "Greening the Government Through Waste Prevention, Recycling and Federal Acquisition," recipients of grants/cooperative agreements and/or sub-awards are encouraged to actively and systematically protect the natural processes that sustain life by whenever possible, incorporating environmentally preferable products in their activities. These measures include, but are not limited to, re-refined oil for all vehicles and heavy equipment, diverting solid waste from disposal in landfills through recycling and use of materials that reduce greenhouse gas emissions.

XVI. RELATED ATTACHMENTS:

Budget Spreadsheet - Attachment Number 1
Statement of Work - Attachment Number 2
Property List - Attachment Number 3
Standard Form 424 - Attachment Number 4

FOR THE U.S. FISH AND WILDLIFE SERVICE:

By: Signature: _____ Date: 9-24-08

Title: Acting ARD-FR ARD, Fishery Resources

FOR THE IDAHO DEPARTMENT OF FISH AND GAME:

By: Signature: _____ Date: _____

James A. Lau, Chief
Title: Bureau of Administration

FWS CONTRACT SUFFICIENCY REVIEW:

By: Signature: _____ Date: 10/14/08

Contracting Officer FWS # 1-P551

Attachment No. 1

Idaho Department of Fish and Gam
2009 Monitoring and Evaluation Budget
July 17, 2008

			Delegated Spending Agency
Project Name	**Budget Category**	**Budget Component**	**IDFG**
ID CWT Lab	1- Salaries & Benefits	1- Salaries - Permanent Employees	$0
		3- Salaries - Seasonal Employees	$44,246
	1- Salaries & Benefits Total		$44,246
	2 - Operating Expenses	A - Administrative Costs	$1,200
		B - Materials & Supplies	$4,201
		C - Routine Maintenance	$1,200
		D - Training	$100
		E - Utilities	$550
		F - Leasing & Rentals	$1,471
		G - Travel & Transportation	$1,900
		H - Professional Services	$400
		I - Other Operating	$600
		J - Fish Marking	$0
	2 - Operating Expenses Total		$11,622
	3 - Agency Overhead	Agency Overhead	$10,615
	3 - Agency Overhead Total		$10,615
	6 - Program Income	Program Income	$0
	6 - Program Income Total		$0
ID CWT Lab Total			**$66,483**
ID Harvest Monitoring	1- Salaries & Benefits	1- Salaries - Permanent Employees	$130,482
		3- Salaries - Seasonal Employees	$144,490
	1- Salaries & Benefits Total		$274,972
	2 - Operating Expenses	A - Administrative Costs	$2,000
		B - Materials & Supplies	$9,881
		C - Routine Maintenance	$2,900
		D - Training	$1,400
		E - Utilities	$300
		F - Leasing & Rentals	$43,301
		G - Travel & Transportation	$13,300
		H - Professional Services	$3,600
		I - Other Operating	$11,160
		J - Fish Marking	$0
	2 - Operating Expenses Total		$87,842
	3 - Agency Overhead	Agency Overhead	$68,934
	3 - Agency Overhead Total		$68,934
	6 - Program Income	Program Income	$0
	6 - Program Income Total		$0
ID Harvest Monitoring Total			**$431,748**
ID Hatchery Evaluation	1- Salaries & Benefits	1- Salaries - Permanent Employees	$181,944
		3- Salaries - Seasonal Employees	$74,500
	1- Salaries & Benefits Total		$256,444
	2 - Operating Expenses	A - Administrative Costs	$4,000
		B - Materials & Supplies	$6,400
		C - Routine Maintenance	$3,000
		D - Training	$2,000
		E - Utilities	$1,400
		F - Leasing & Rentals	$46,052
		G - Travel & Transportation	$11,860
		H - Professional Services	$1,250
		I - Other Operating	$2,000
		J - Fish Marking	$0
	2 - Operating Expenses Total		$77,962
	3 - Agency Overhead	Agency Overhead	$63,537
	3 - Agency Overhead Total		$63,537
	6 - Program Income	Program Income	$0
	6 - Program Income Total		$0
ID Hatchery Evaluation Total			**$397,943**
IDFG M&E 09 Grand Total Budget			**$896,174**

Attachment No. 2

STATEMENT OF WORK FOR COOPERATIVE AGREEMENT NUMBER: 14110-9-J008

Title:	LSRCP Fish Hatchery Monitoring and Evaluation Idaho Department of Fish and Game
Cooperator:	Idaho Department of Fish and Game 600 South Walnut P.O. Box 25 Boise, Idaho 83707
Anadromous Manager:	Pete Hassemer
Anadromous Coordinator:	Sam Sharr
Research Coordinator:	Dan Schill
Project Leader:	Brian Leth
Study Period:	October 1, 2008 through September 30, 2009

PART 1- SPRING/SUMMER CHINOOK SALMON

Introduction

The Idaho Department of Fish and Game (IDFG) operates three spring/summer Chinook salmon hatcheries; Clearwater, McCall, and Sawtooth that are part of the Lower Snake River Compensation Plan (LSRCP). In the most recent status review, NOAA included the hatchery broodstocks from the McCall and Sawtooth fish hatcheries in the listed Snake River ESU. Broodstock from the Clearwater hatchery are not currently listed. Detailed operations of these three LSRCP facilities are described in draft Hatchery and Genetic Management Plans (HGMPs), and annual Hatchery Brood Year Reports (available from IDFG, Boise, Idaho). A brief description of each program follows.

The McCall summer Chinook salmon hatchery infrastructure consists of a incubation and rearing facility located on the North Fork Payette River near the town of McCall, Idaho and an adult trapping and spawning facility located on the South Fork Salmon River approximately 113 kilometers upstream of the mouth (Figure 1). Fish reared at McCall Fish Hatchery are released into the South Fork Salmon River as yearling smolts. The adult collection facility on the South Fork Salmon River includes a weir, trap, two adult holding ponds, and a covered concrete pad where the artificial spawning occurs. The LSRCP goal for the McCall hatchery is to return 8,000 adults above Lower Granite Dam (Table 1). Most hatchery-origin fish captured at the trap are ponded as broodstock. All natural-rigin fish trapped are released above the weir to spawn naturally. Hatchery-origin adults collected in excess of broodstock needs may be given away for subsistence use, food banks, or returned to the lower river in an effort to "recycle" fish back through the treaty and non-treaty fisheries or outplanted into natural production areas identified as suitable for this hatchery stock.

The Sawtooth Fish Hatchery infrastructure consists of a weir, adult trap, incubation and rearing space all located on the banks of the Upper Salmon River approximately 10 kilometers upstream from the town of Stanley, Idaho (Figure 1). A satellite facility of Sawtooth Fish Hatchery located on the East Fork Salmon River includes a weir, adult trap and holding ponds. Incubation and rearing of eggs collected at the East Fork trap occurs at the Sawtooth Fish Hatchery. However, due to low adult escapement into the East Fork Salmon River, all adults captured at the weir have been released upstream of the weir to spawn naturally since 1994. The original LSRCP adult return goal for the Sawtooth Hatchery program was 19,445 Chinook salmon to the project area from juvenile releases at the Sawtooth Hatchery weir, the East Fork Salmon River, and from Valley Creek (Table 1). However, due to low numbers of returning adults, no releases have been made into Valley Creek, and since 1995, no juveniles have been released into the East Fork Salmon River. Hatchery-origin adults captured at the weir are ponded for broodstock. Natural-origin adults captured at the Sawtooth Hatchery weir are released upstream to spawn naturally.

The Clearwater Fish Hatchery infrastructure consists of an incubation and rearing facility located on the North Fork Clearwater River near the town of Ahsahka, Idaho and three adult collection satellite facilities located on Walton Creek (Upper Lochsa River), Red River (S.F. Clearwater River), and Crooked River (S.F. Clearwater River) (Figure 1). Incubation and rearing for all three satellites occurs at the Clearwater River Hatchery site. The Powell and Red River satellites each have an adult trap, adult holding ponds and a juvenile rearing/acclimation pond. The Crooked River satellite has an adult trap and two juvenile raceways. The LSRCP adult escapement goal for the Clearwater Hatchery program includes 2,553 from the Powell release, 2,553 from the Red River release and 6,809 from the Crooked River release (Table 1). All adults captured at the Crooked River trap are transferred to the Red River adult holding ponds. Similarly to other LSRCP hatcheries in Idaho, natural-origin fish are released upstream of the weirs to spawn naturally. All hatchery-origin fish are ponded for broodstock production. Hatchery-origin adults collected in excess of broodstock needs for Clearwater basin hatcheries may be given away for subsistence use, recycled back through the fishery, or out planted in the Clearwater River basin.

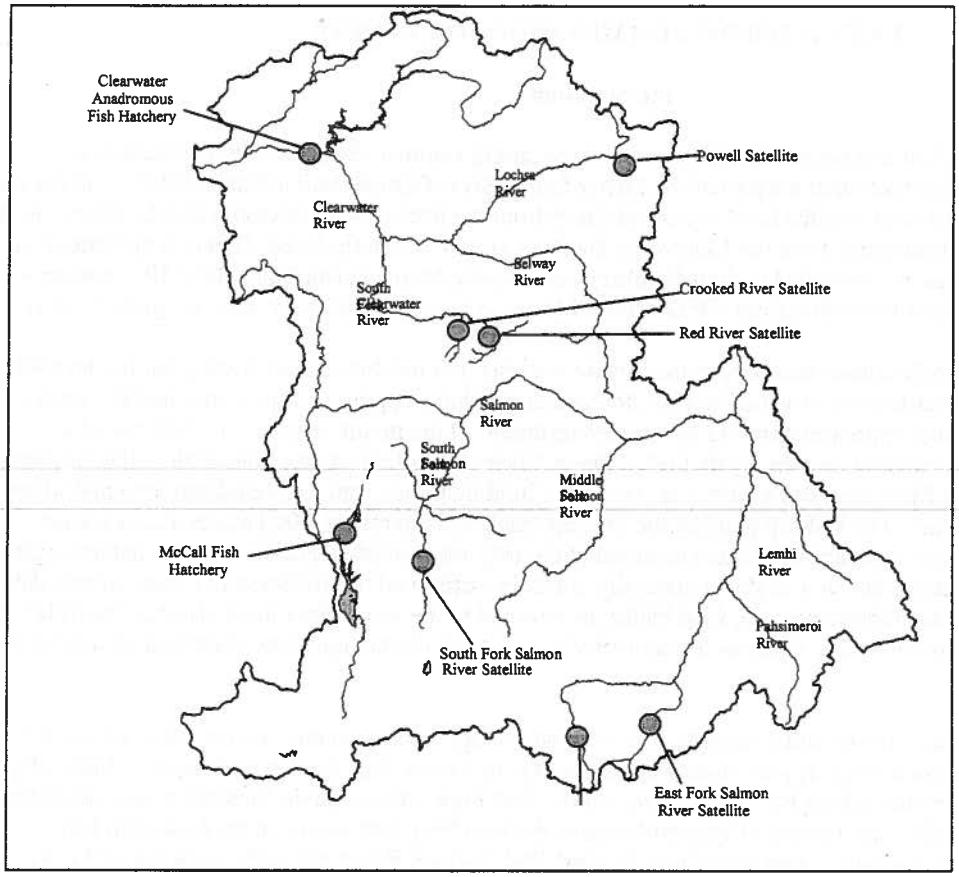

Figure 1. Locations of Chinook salmon hatcheries and satellite facilities in Idaho that are operated by IDFG and are part of the LSRCP.

Table 1. Adult spring and summer run Chinook salmon release and escapement goals for LSRCP funded hatcheries located in Idaho and operated by IDFG. The escapement goals listed for individual release sites are a subset of the overall hatchery escapement goals (in bold font).

Hatchery and Release Site	Run Type	Juvenile Release Target	Project Area Escapement Goal
McCall Hatchery (SFSR)	Summer	**1,000,000**	**8,000**
Sawtooth Hatchery	Spring	**2,300,000**	**19,445**
Sawtooth Hatchery Weir		1,300,000	11,310
E.F. Salmon R. Satellite		700,000	6,090
Valley Creek		300,000	2,045
Clearwater Hatchery	Spring	**1,368,000**	**11,915**
Powell Satellite		334,000	2,553
Red River Satellite		334,000	2,553
Crooked River Satellite		700,000	6,809
	TOTAL	**4,668,000**	**39,360**

The following sections describe seven work elements and the associated objectives and deliverables that make up IDFG's hatchery evaluation program under the LSRCP. To effectively monitor the LSRCP hatchery mitigation program, juvenile production information along with the number adults returning to the hatchery facilities, spawning grounds, and fisheries that result from hatchery releases must be documented. As such, IDFG's Monitoring and Evaluation (M&E) program is made up of three distinct components: the Hatchery Evaluation Study (HES), the Harvest Monitoring Project (HMP) and the Coded Wire Tag (CWT) Laboratory. These three components are referred to throughout this document.

Work Element 1- Document and Evaluate Production Strategies

Four major objectives of this work element are to:

a. Collect and evaluate the information necessary to determine the number, origin, biological characteristics and disposition of adult Spring/summer Chinook that return to Idaho hatcheries.
b. Collect the information necessary to estimate survival of fish during the culture phase of their life cycle from egg take to release.
c. Describe fish health history and the potential specific disease incidents may have on program fish performance.
d. Describe research that is being undertaken to assess factors that affect post release survival.

Objective 1a. Adult Trapping and Broodstock Collection:

The IDFG broodstock management program is designed to maximize genetic variability by collecting and spawning adults that are representative of the entire run in terms of return timing and age composition. The program strives to reduce negative effects of inbreeding and drift by maximizing the number of adults spawned. A genetic monitoring program (sample collection only at this time) will allow for the future assessment of broodstock structure and diversity over time.

The following data is collected by hatchery staff for all fish trapped at LSRCP weirs: location, date, species, stock, presence of marks or tags, type or identification of mark/tag, length, sex, and disposition (e.g. ponded, spawned, released). All information collected is archived in an electronic format and is in the process of being incorporated into a comprehensive statewide anadromous hatchery database (see Work Element 4). HES staff compile adult return information (by age class) for all LSRCP facilities in the HES annual report.

In fiscal year 2009, HES staff will:

1. *Verify that all 2008 adult trapping data has been uploaded to the IDFG anadromous database.*
2. *Summarize 2008 adult return data (by age class) for all LSRCP hatchery facilities.*
3. *Estimate age composition by gender and origin for all historic adult trapping data from McCall, Sawtooth and Clearwater fish hatcheries.*

Objective 1b. Egg to Release Fish Culture Monitoring

Routine fish culture operations at Idaho hatcheries are monitored by hatchery staff. Annually, HES staff summarize and report key life stage survival metrics for all LSRCP hatcheries in the HES report. Survival between the following life cycle stages is reported:

1. Females spawned
2. Green Eggs taken
3. Eyed Eggs
4. Fry Ponded
5. Juveniles Released (by life stage).

Rearing conditions at the facilities routinely monitored by hatchery staff include:

1. Water Flow
2. Water Temperature
3. Rearing Density
4. Type, date, and amount of food fed along with feed conversion rates

5. Dissolved Oxygen

These data, coupled with disease monitoring information (see below) allow for interpretation of survival data. HES staff will compile and report on fish culture survival data for all LSRCP Chinook salmon hatcheries in Idaho on an annual basis. A comprehensive, web-based, anadromous hatchery database that will make program information available to a wide audience of users is currently being developed (see Work Element 4).

In fiscal year 2009, HES staff will:

1. *Summarize key life stage survival (from egg to release) for all LSRCP facilities in the HES annual report.*
2. *Report any significant issues regarding water quality that impacted any LSRCP facility in the HES annual report.*

Objective 1c. Disease Monitoring, Prevention, and Treatment

The IDFG Eagle Fish Heath Lab conducts routine disease monitoring, and prescribes any necessary treatments.

In fiscal year 2009, HES staff will:

1. *Include a discussion, in the HES annual report, of fish health history and the potential impact specific disease incidents have on the performance of program fish.*

Objective 1d. Optimum production strategies and post release survival

HES staff assist hatchery staff in the development of appropriate experimental designs to address factors potentially limiting the success of IDFG LSRCP hatchery programs.

In FY 2009 HES staff will write up findings from the following studies: 1) Chinook salmon size at release, 2) NATURES rearing.

In an effort to document the post-release success of outmigrating juveniles released from LSRCP facilities each year, HES staff will estimate the survival of smolts (from release to Lower Granite Dam) by PIT tagging a minimum of 300-700 fish from all groups of Chinook released from LSRCP facilities in Idaho that are operated by IDFG. Survival to Lower Granite Dam is estimated by querying PIT tag interrogation data from the PTAGIS regional database and using the SURPH (Lady et al. 2001) mark/recapture computer program.

In fiscal year 2009, HES staff will:

1. *Complete the Clearwater Fish Hatchery Size-at-release summary report.*
2. *Complete the Sawtooth Fish Hatchery Natures Rearing summary report.*
3. *Estimate and report survival of juveniles released from McCall, Sawtooth and Clearwater Hatcheries to Lower Granite Dam.*
4. *Estimate differential mortality/recovery rates or tag loss rates for one-ocean Chinook salmon returning to the Powell Satellite facility that were either PIT/CWT tagged or CWT-only as juveniles*
5. *Coordinate CWT marking and PIT tagging of BY07 Chinook salmon to evaluate acclimation vs. direct release at the Powell Satellite Facility. Returning adults will be evaluated in 2010-2012.*

Estimated Budget:

Work Element 1- Evaluation of Production Strategies	
Personnel	$45,672
Operating	$13,643
Overhead	$11,269.89
Total	**$70,585**
% of Total M&E Budget	5.97

Work Element 2 – Estimate Hatchery Contribution

The HMP and HES staff develop annual estimates of the total contribution program spring/summer Chinook salmon make toward meeting LSRCP mitigation as well as state management objectives. Estimates include an accounting of harvest and escapement (see Objective 2a, and 2b below).

Objective 2a – Accounting of Harvest

Tasks associated with the accounting of harvest include the following:

1. Marking and Tagging
2. Operation of CWT Laboratory
3. Estimation of Harvest
    a. Ocean and Columbia River fisheries
    b. Project area fisheries

Task 1 - Marking and tagging

In order to make estimates of the number of project fish recovered in various fisheries and terminal locations, the IDFG uses a combination of adipose fin clipping, Passive Integrated Transponders (PITs) and CWTs to manage spring/summer Chinook salmon. With the exception of specific, experimental supplementation releases, all spring/summer Chinook salmon released from IDFG LSRCP hatcheries with the objective of contributing to future fisheries are mass-marked with an adipose fin clip. Specific evaluation groups receive PIT or CWT tags to address a variety of stock assessment and management objectives (including the ability to forecast adult returns) and mark plans are developed annually by IDFG to guide this effort. The estimated number of brood year 2007 juvenile Chinook salmon to be released in 2008-2009 and the associated marks and tags are listed in Table 2.

Table 2. Draft mark plan for brood year 2007 Chinook salmon at LSRCP fish hatcheries in Idaho that are operated by IDFG.

Hatchery	Estimated Release	Marks and Tags	Release Site/ Comment
Clearwater	200,000	100% AD 100K CWT 3.25K PIT	Powell Pond For harvest info, Acclimation v. Direct Release study Project area escapement/Harvest management
Clearwater	200,000	100% AD 100K CWT 3.25K PIT	Powell Pond For harvest info, Acclimation v. Direct Release study Project area escapement/Harvest management
Clearwater	335,000	100%AD 80k CWT 5.5K PIT	Powell Pond (smolt-reared on 2nd use in steelhead raceways) Project area escapement/Harvest management
Clearwater	300,000	200K AD/CWT 100K CWT 9K PIT	Lower Selway R. For harvest and stock ID info Project area escapement/Harvest management
Clearwater	300,000	300,000 OTC	Upper Selway (parr) OTC feed mark
Clearwater	700,000	100% AD 60K CWT 13k PIT	Crooked River For harvest info Project area escapement/Harvest management
Clearwater	400,000	100% AD 60K CWT 12K PIT	Red River Pond For harvest info Project area escapement/Harvest management
McCall	1,050,000	100% AD 200K CWT 52K PIT	Knox Bridge, SFSR US-Canada CSS study-(if funded in 2009)
Sawtooth	175,000	100% AD 120K CWT 15K PIT	Sawtooth weir For harvest info Project area escapement/Harvest management

Fin clipping, CWT and PIT tag purchase/application at LSRCP hatcheries in Idaho are funded with LSRCP Operation and Maintenance (O&M) funds, Bonneville Power Administration funds (Comparative Survival Study), and U.S.-Canada Treaty funds along with and other research resources. PIT tags for the McCall hatchery are purchased under a separate BPA contract as part of the Comparative Survival Study (CSS) but are also used to estimate project area escapement.

In fiscal year 2009, M&E staff will:

1. *Assist with the development of mark and tag plans that support LSRCP and state management objectives.*
2. *Assist marking crews with PIT tagging evaluation groups of spring/summer Chinook salmon.*
3. *Enter, validate, and maintain all marking, tagging and release data in the IDFG hatchery database.*
4. *Manage, validate, and upload, all PIT tag files to the PTAGIS regional database.*

Estimated Budget:

Marking and Tagging	
Personnel	$10,439
Operating	$3,118
Overhead	$2,576
Total	**$16,134**
% of Total M&E Budget	1.80

Task 2 – Operation of CWT Laboratory

The IDFG coded wire tag laboratory is funded primarily through the LSRCP Cooperative Agreement, but also receives some funding through other sources. Annually, the M&E staff coordinates the collection of Chinook salmon snouts from project area fisheries, hatchery traps, and spawning ground surveys. Tags are subsequently extracted, read, and entered into the IDFG hatchery database in the CWT laboratory at the Nampa Research Office. After verification, all recovery data is uploaded to the Pacific States Marine Fisheries Commission's Regional Mark Information System (RMIS).

In fiscal year 2009, CWT lab staff will:

1. *Assemble and distribute snout sample bags to all LSRCP hatcheries, to harvest monitoring staff, and to IDFG research staff that will be conducting spawning ground surveys in 2009.*
2. *Coordinate the delivery of all snouts collected in 2009 to the CWT lab in Nampa.*
3. *Excise tags, read, enter and validate all CWT code information into the IDFG database.*
4. *Upload all recovery information into the RMIS database.*
5. *Respond to inseason CWT data processing requests to help facilitate management of ongoing fisheries.*

Estimated Budget:

Operation of CWT Lab	
Personnel	$22,123
Operating	$5,811
Overhead	$5,307
Total	**$33,241**
% of Total M&E Budget	3.71

Task 3 – Estimate Harvest

A. Ocean and Columbia River fisheries

Estimates of harvest or the distribution of interceptions from fisheries in the Pacific Ocean, Columbia and Snake Rivers downstream of Idaho are reported by HES staff on an annual basis. Harvest of Chinook salmon downstream of Idaho is estimated by querying the RMIS database for the number of hatchery

specific CWTs recovered in downstream fisheries. Numbers of recoveries are expanded to total estimated harvest based on the reported sample rate and the proportion of tagged fish in the group to be estimated. Some groups of CWT tagged fish released in one location may be used to represent untagged release groups in other locations. Typically, these groups come from the same brood stock and are released at the same life stage. Estimates of harvest are reported for each of the strata listed below.

1. Pacific Ocean Coastal Fisheries
    a. Commercial
        i. Alaska
        ii. British Columbia
        iii. US Coast
2. Columbia River (Zones 1-5)
    a. Commercial
    b. Sport
3. Columbia River (Zone 6)
    a. Tribal Ceremonial and Subsistence (C&S)
    b. Non-Tribal Sport
4. Snake River (McNary to Lower Granite Dam)
    a. Sport

B. Project area fisheries

Estimates of spring/summer Chinook salmon harvest within Idaho are determined from creel surveys conducted by IDFG staff. Creel survey methods include a combination of check stations, roving creel, and voluntary survey drop boxes.

Spring/Summer Chinook salmon catch estimation and sampling in Idaho is funded with LSRCP HMP funds, Idaho Power Company funds, and state license/permit sales funds. LSRCP HMP staff, in conjunction with IDFG Regional and Fisheries Bureau staff, are responsible for all harvest monitoring and for the development spring/summer Chinook salmon catch estimates in the Clearwater River drainage, and sections of the Lower Salmon River. Harvest monitoring in Snake River is conducted in conjunction with staff from the Washington Department of Fish and Wildlife. Clearwater River and main Salmon River harvest monitoring results are presented annually to the LSRCP office as a dedicated report. The LSRCP M&E budget also supports some of the harvest monitoring and catch reporting effort that occurs on the South Fork Salmon River by providing money for seasonal employees to assist with the creel effort. The remaining funding for the SFSR creel program comes from state license/permit sales. Harvest monitoring and catch estimation data for the South Fork Salmon River is bound separately and available from the IDFG Boise office.

In fiscal year 2009, HMP and HES staff will:

1. *Implement spring/summer Chinook salmon harvest monitoring programs in Idaho where applicable.*
2. *Develop and/or summarize harvest estimates for spring/summer Chinook salmon Ocean, Columbia River, and project area fisheries. Summarize historic harvest estimates up to and including 2005.*
3. *Maintain all harvest data in IDFG databases and present harvest estimates in a draft annual report to be submitted by the end of the fiscal year.*

Estimated Budget:

Estimating Harvest	
Personnel	$71,600
Operating	$29,471
Overhead	$19,203
Total	**$120,274**
% of Total M&E Budget	13.42

Objective 2b – Estimate Escapement

HES and HMP staff estimate the escapement (the number of fish escaping fisheries) of LSRCP program fish in Columbia River tributaries as well as for the project (Lower Granite Dam) and terminal areas (hatchery weirs and spawning grounds).

Columbia River Tributary Escapement
Escapement of LSRCP program fish in Columbia River tributaries is estimated by querying the RMIS database for the number of hatchery specific CWTs recovered. Numbers of recoveries are expanded to total estimated escapement based on the reported sample rate and on the proportion of tagged fish in the group to be estimated.

Project and Terminal Area Escapement
In fiscal year 2009, HES staff will work with IDFG Fisheries Bureau staff to estimate the project area escapement (at Lower Granite Dam) of the McCall and Clearwater, and Sawtooth fish hatcheries using PIT tag interrogation data collected at Lower Granite Dam. In 2009, estimates for Sawtooth Fish Hatchery, based on PIT tags, will only include age-3 and age-4 fish.

Harvest estimates from Idaho fisheries coupled with hatchery weir data provide an indirect estimate of project area escapement for release groups with insufficient number of PIT tags to directly estimate the escapement to Lower Granite Dam. Therefore, the ability to accurately account for all fish returning to hatchery weirs is a crucial component of estimating project area escapement. However, operational and natural factors may significantly bias estimates of escapement based on trap counts due to: fish arriving before weirs can be installed, fish escaping through weirs after installation, or fish dropping out below weirs and spawning in the main stem or moving into tributaries below the weir sites.

Accounting of the unintended escapement of project fish above the hatchery weirs and recovery of strays below the weirs or into other tributaries provides additional information to estimate project area escapement. Currently, there are no LSRCP funds directed at recovering LSRCP program fish on spawning grounds above weirs or strays in adjacent tributaries. However, researchers on the ongoing ISS study funded by BPA do collect this information as part of their monitoring design. Coordination with this project allows HES staff to estimate the number of fish escaping above the weirs and the numbers straying into adjacent tributaries. Additionally, HES staff cooperates with other ongoing monitoring programs conducted by the Nez Perce Tribe in the South Fork Salmon River to report the number of McCall Hatchery program fish that are collected below the SFSR weir during spawning ground surveys.

In fiscal year 2009, HES staff will:

1. *Estimate and report the number of LSRCP program fish recovered in Columbia River tributaries.*
2. *Estimate and report the project area and terminal escapement for McCall, Clearwater, and Sawtooth fish hatcheries based on PIT tag interrogations at Lower Granite Dam, weir recoveries, and spawning ground surveys.*

Estimated Budget:

Estimating Escapement	
Personnel	$13,049
Operating	$3,898
Overhead	$3,220
Total	**$20,167**
% of Total M&E Budget	2.25

Objective 2c – Smolt-to-Adult Survival
No specific research is anticipated in fiscal year 2009 directed at developing smolt-to-adult survival rates as the primary work objective. However, as part of the development of products for Objectives 1 and 2 (juvenile releases and adult accounting), smolt-to-adult rates are calculated and reported in the LSRCP annual progress report.

No money is budgeted specifically to estimate smolt-to-adult survival rates.

Combined Budget for Work Element #2 (Objectives 2a and 2b):

Work Element 2 – Estimating Hatchery Contribution	
Personnel	$117,210
Operating	$42,299
Overhead	$30,306.65
Total	**$189,815**
% of Total M&E Budget	21.18

Work Element 3 – Legal Obligations

HES staff participate in the development and updating of HGMPs for the LSRCP hatchery facilities as a requirement for ESA Section 7 consultation. On an annual basis, staff may devote up to five weeks of personnel time associated with this process.

Estimated Budget:

Work Element 3 - Legal Obligations	
Personnel	$13,049
Operating	$3,898
Overhead	$3,219.97
Total	**$20,167**
% of Total M&E Budget	2.25

Work Element 4 – Electronic Database Systems

In fiscal year 2009, M&E staff will continue to collaborate with IDFG Natural Resources Policy Bureau staff, Fisheries Bureau staff, and Hatchery O&M staff on the development of a comprehensive relational database to house IDFG LSRCP hatchery information. HES staff will play a key role in the development of this product and efforts will continue beyond fiscal year 2009. Data elements will include the accounting of LSRCP hatchery production facilities over the complete life cycle of program fish.

Data elements that make up this suite of databases will be added incrementally, and existing database products will be incorporated into the new structure. The initial data elements will include the adult recovery data at the weirs. This will then be expanded to include the complete set of life history stages through the entire hatchery production cycle. Also included will be all of the marking and release information currently held in the IDFG Mark/Release database. As development of this new structure proceeds, elements will be added to incorporate harvest, fish health, and genetic sample information into a form that will be readily accessible through a common portal.

All databases developed as part of this project will be developed in Microsoft SQL Server, and will be maintained on servers incorporating stringent data backup and archiving protocols.

In fiscal year 2009, HES and HMP staff will:

1. *Participate in hatchery database committee meetings and help steer the database development process.*
2. *Complete uploading process for all historical adult return data from all LSRCP hatchery facilities.*
3. *Assist with developing protocols to capture historic spawning and final disposition data to allow uploading data into the hatchery database.*
4. *Assist with compiling and uploading of historic spawning and final disposition data*

Estimated Budget:

Work Element 4 - Database Development	
Personnel	$26,098
Operating	$7,796
Overhead	$6,439.94
Total	**$40,334**
% of Total M&E Budget	4.50

Work Element 5 – Peer Review, Biometric Review, Analysis and Reporting

On an individual case basis, M&E staff will seek professional services (typically biometrics support) to facilitate the development of defendable project methodologies.

Estimated Budget:

Work Element 5 - Biometric Support	
Personnel	$3,915
Operating	$1,169
Overhead	$965.99
Total	**$6,050**
% of Total M&E Budget	0.68

Work Element 6 – Participation in External Forums

Monitoring and evaluation staff will participate in or generate information that contributes to essential regional forums such as, but not limited to: harvest planning, mark planning, hatchery reform planning, and ESA consultation and biological opinion planning. Participation (unless otherwise approved) will not exceed three-weeks annually.

Estimated Budget:

Work Element 6 - External Forums	
Personnel	$3,915
Operating	$1,169
Overhead	$965.99
Total	**$6,050**
% of Total M&E Budget	0.68

Work Element 7 – Regionally Significant Research

M&E staff will contribute technical information to support regionally significant issues and programs such as, but not limited to, the Comparative Survival Study (BPA #199602000), StreamNet (BPA #199810804), the Collaborative System-wide Monitoring and Evaluation Program (BPA # 200303600), ISS (BPA # 198909800, 198909801, 198909802, 198909803), etc. Participation (unless otherwise approved will not exceed three-weeks annually.

Estimated Budget:

Work Element 7 – Regional Research	
Personnel	$3,915
Operating	$1,169
Overhead	$965.99
Subtotal	**$6,050**
% of Total M&E Budget	0.68

Overall Budget Summary (Work Elements 1-7)

Work Element	Chinook	Steelhead	Total
1. Hatchery Production	$70,585	$19,627	$90,212
2. Adult Accounting	$189,815	$451,133	$640,948
3. Legal Obligations	$20,167	$19,627	$39,794
4. Electronic Database	$40,334	$49,068	$89,402
5. Peer Review	$6,050	$5,888	$11,938
6. External Forums	$6,050	$5,888	$11,938
7.Regionally Significant Research	$6,050	$5,888	$11,938
Total	**$339,052**	**$557,120**	**$896,171**

PART 2- SUMMER STEELHEAD

Introduction

The Idaho Department of Fish and Game (IDFG) operates two steelhead rearing facilities (Clearwater and Magic Valley Fish Hatcheries), and one steelhead trapping facility (Sawtooth Fish Hatchery) as part of the Lower Snake River Compensation Plan (LSRCP). In addition to these facilities, the IDFG Monitoring and Evaluation program also monitors Hagerman National Fish Hatchery which is operated by the US Fish and Wildlife Service (USFWS) to raise steelhead for IDFG. Detailed operations of the IDFG facilities are described in annual Hatchery Brood Year Reports available from Idaho Department of Fish and Game. Detailed annual operations of the Hagerman National Fish Hatchery are available from either the USFWS, or the hatchery itself. A brief description of each program follows.

The Clearwater Fish Hatchery is located at the confluence of the North Fork and main stem of the Clearwater River in the town of Ahsahka, Idaho (Figure 2). The main hatchery has no adult return facilities, and currently receives all of the steelhead eggs that are incubated at the hatchery from Dworshak National Fish Hatchery, which is located directly across the North Fork Clearwater River. Clearwater Fish Hatchery does trap adult steelhead at two satellite facilities located on Crooked River and Red River, which are both tributaries to the South Fork Clearwater River. Currently, adult steelhead recovered at the satellite facilities are enumerated, but are not retained for spawning.

Clearwater Fish Hatchery receives green steelhead eggs from Dworshak National Fish Hatchery both for its own production, as well as for shipment to both Magic Valley and Hagerman National Fish Hatcheries. The adult steelhead recovered at Dworshak National Fish Hatchery are listed as part of the Snake River Distinct Population Segment (DPS) under the Endangered Species Act. All eggs are treated with a strict quarantine protocol to minimize any chance of disease transfer from Dworshak National Fish Hatchery. This is especially necessary because Clearwater Fish Hatchery receives water from the North Fork of the Clearwater above Dworshak Dam, whereas Dworshak National Fish Hatchery receives water from the river below the dam, which has a different disease regime.

The LSRCP adult return goal for Clearwater Fish Hatchery is 14,000 adults above Lower Granite Dam (Table 3). However, juvenile release numbers have been reduced from the original design target as a result of logistical rearing constraints and US vs. Oregon negotiations. This reduction makes it unlikely that the existing adult return goal can be met.

Hagerman National Fish Hatchery is located on the Snake River in the town of Hagerman (Figure 2). There is no run of steelhead in the Snake River above Hells Canyon Dam, so all of the steelhead raised at Hagerman National Fish Hatchery come from eggs taken from adults trapped at either Dworshak National, Sawtooth, or Pahsimeroi Fish Hatcheries. With the exception of the Dworshak stock as noted above, none of these stocks of hatchery steelhead are currently listed under the Endangered Species Act. All eggs are received at the eyed stage. Hagerman National Fish Hatchery is located to take advantage of the abundant, constant temperature, water of the Thousand Springs region in the Snake River canyon. The hatchery has three banks of raceways with water from each bank re-combined before being distributed to the next bank. This serial re-use of the water is unique to this hatchery among the LSRCP steelhead rearing facilities, and can cause concerns related to disease transmission. Current smolt production at Hagerman National Fish Hatchery is not up to the original design target due to physical constraints and water limitations.

Hagerman National Fish Hatchery maintains the broodstock for the Sawtooth A-stock of steelhead which returns to Sawtooth Fish Hatchery. The other two stocks raised at Hagerman National Fish Hatchery are used in releases to a variety of locations in the Upper Salmon River drainage below the Sawtooth Fish Hatchery, but upstream of the Pahsimeroi River, or the Little Salmon River drainage near the town of Riggins. The LSRCP adult return goal for Hagerman National Fish Hatchery is 13,600 fish above Lower Granite Dam (Table 3). This number is a combination of all stocks in all release locations, not just the Sawtooth broodstock.

Magic Valley Fish Hatchery is located in the Snake River canyon on the south bank of the Snake River well upstream of Hagerman National Fish Hatchery (Figure 2). The water supply for the hatchery is part of the same Thousand Springs complex located on the north side of the Snake River Canyon. Therefore, the water supply for

Magic Valley must be piped under the Snake River to a degassing tower on the south bank before being piped to the hatchery. Declining flows in the springs that supply the hatchery have resulted in decreased smolt production in recent years.

Magic Valley Fish Hatchery receives eggs from adults spawned at Dworshak National, Pahsimeroi, and Sawtooth Fish hatcheries, as well as Sawtooth Fish Hatchery's East Fork satellite facility, and the Squaw Creek fish trapping facility. Eggs received from Dworshak National Fish Hatchery, as well as the East Fork satellite facility, are listed as part of the Snake River DPS under the Endangered Species Act. All eggs are received at the eyed stage. Smolts from Magic Valley Fish Hatchery are released at the Squaw Creek and East Fork facilities, as well as a fairly large and varying number of locations in the Upper Salmon, and Little Salmon river basins. The LSRCP adult return goal for Magic Valley Fish Hatchery is 11,660 fish above Lower Granite Dam (Table 3).

The Sawtooth Fish Hatchery infrastructure consists of a weir, adult trap, incubation and rearing space all located on the banks of the Upper Salmon River approximately 10 kilometers upstream from the town of Stanley, Idaho (Figure 2). A satellite facility of Sawtooth Fish Hatchery located on the East Fork Salmon River includes a weir, adult trap and holding ponds. Incubation and rearing of eggs collected at the East Fork trap occurs at the Sawtooth Fish Hatchery. All eggs taken from steelhead spawned at Sawtooth Fish Hatchery, as well as eggs taken for LSRCP programs from fish spawned at Pahsimeroi Fish Hatchery are incubated to the eyed stage at Sawtooth Fish Hatchery before being distributed to Hagerman National, and Magic Valley Fish Hatcheries.
Sawtooth Fish Hatchery also oversees the operation of the Squaw Creek Acclimation Pond and the associated adult weir and trap. The adult trap and juvenile release pond are maintained by a combination of HES and Sawtooth Fish Hatchery staff. The original intent of the pond was to determine whether or not acclimation ponds could be used to retain non-migrant smolts that otherwise could create a competitive pressure on other listed fish species in the drainage. The secondary purpose of the trap was to establish a run of locally adapted, hatchery reared steelhead supplemental to the normal hatchery run.

The Squaw Creek Acclimation Pond and facility consists of a juvenile acclimation pond, and a non-functional adult trap. The weir and trap used to recover adult steelhead returning to Squaw Creek, is a temporary structure installed each spring at a site almost a kilometer downstream of the pond. The use of this lower site provides a more secure and effective adult recovery operation than was attainable at the pond itself. Adult steelhead retained for broodstock production are transported to the East Fork Satellite Facility to be held for spawning. No spawning operations occur at Squaw Creek. There is no LSRCP adult return goal for the Squaw Creek project. The project objective is to recover sufficient adults to produce approximately 300,000 full-term smolts.

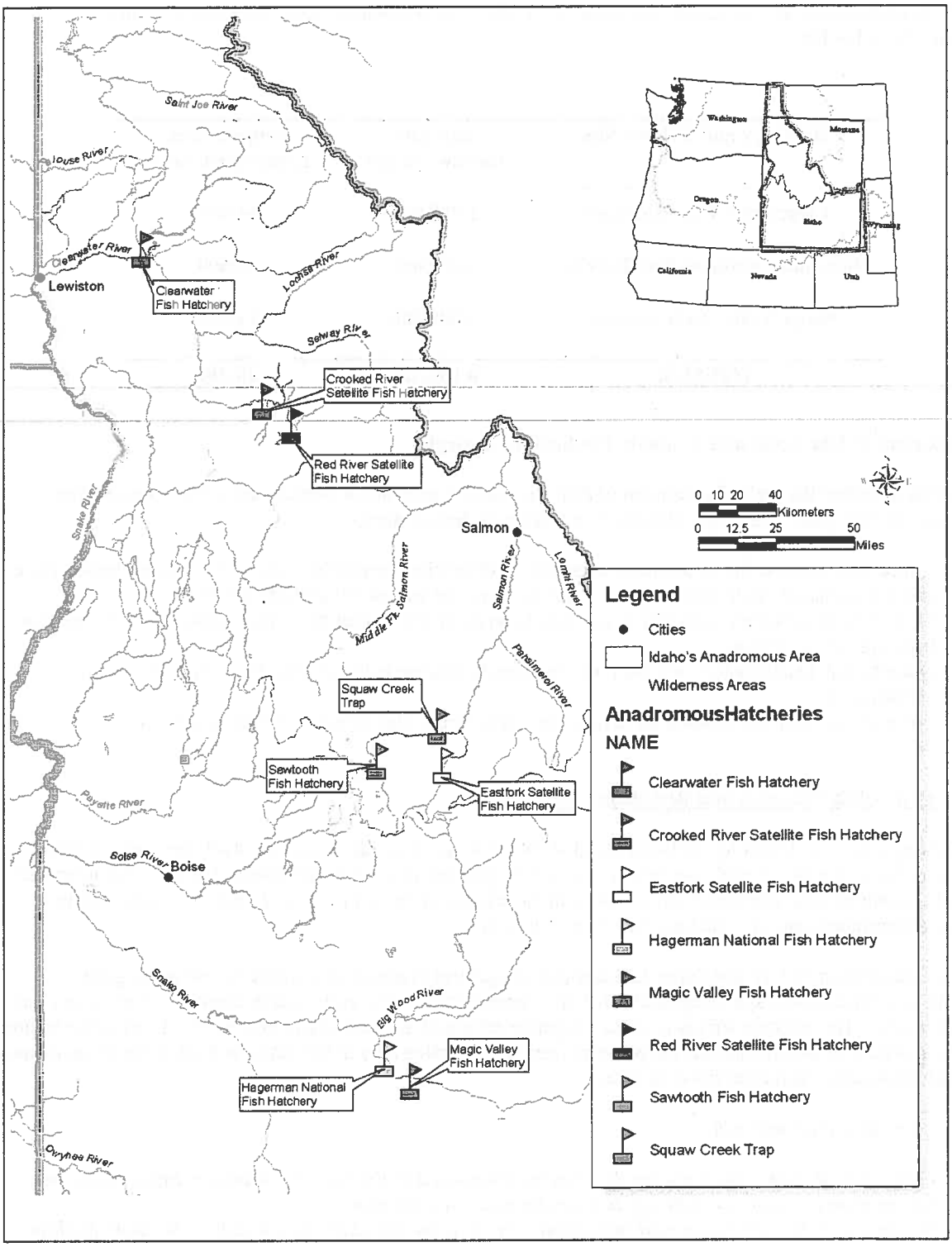

Figure 2. Locations of steelhead hatcheries and satellite facilities in Idaho that are operated by IDFG and are part of the Lower Snake River Compensation Plan.

Table 3. Juvenile steelhead production targets and adult steelhead escapement goals for LSRCP funded hatcheries located in Idaho.

Hatchery and Release Site	Juvenile Release Target	Project Area Escapement Goal
Clearwater Fish Hatchery	**1,750,000**	**14,000**
Hagerman National Fish Hatchery	**2,400,000**	**13,600**
Magic Valley Fish Hatchery	**2,000,000**	**11,660**
TOTALS:	**6,150,000**	**39,260**

Work Element 1: Document and Evaluate Production Strategies

This section describes the Idaho Department of Fish and Game's program to evaluate the Lower Snake River Compensation Plan goal. Four major objectives of this work element are to:

a. Collect and evaluate the information necessary to determine the number, origin, biological characteristics and disposition of adult steelhead that return to Idaho hatcheries and satellite facilities.
b. Collect the information necessary to estimate survival of fish during the culture phase of their life cycle from egg take to release.
c. Describe fish health history and the potential specific disease incidents may have on program fish performance.
d. Describe research that is being undertaken to assess factors that affect post release survival.

Objective 1a. Adult Trapping and Broodstock Collection:

The following data is collected for all fish trapped at our weirs: location, date, species, stock, presence of marks or tags, type or identification of mark/tag, length, sex, and disposition (e.g. spawned, released, killed). All information collected is archived in an electronic format and is in the process of being incorporated into a comprehensive statewide anadromous hatchery database (see Work Element 4).

The Idaho Department of Fish and Game broodstock management program is designed to maximize genetic variability by collecting and spawning adults that are representative of the entire run in terms of return timing and age composition. The program strives to reduce negative effects of inbreeding and drift by maximizing the number of adults spawned. A genetic monitoring program (sample collection only at this time) will allow future assessment of broodstock structure and diversity over time.

In fiscal year 2009, HES staff will:

1. *Verify that all 2008 adult trapping data has been uploaded to the hatchery database. Report numbers of fish recovered broken down by age and gender in an annual report.*
2. *Summarize 2008 adult return and final disposition data (by age class) for all LSRCP hatchery facilities.*
3. *Estimate age composition by gender and origin for all historic adult steelhead trapping data..*

Objective 1b. Egg to Release Fish Culture Monitoring

Routine fish culture operations at Idaho hatcheries are monitored by hatchery staff. HES staff will summarize and evaluate key life stage survival metrics for all LSRCP hatcheries in the HES annual report. Survival between the following life stages is reported:

1. females spawned
2. green eggs taken
3. eyed eggs incubated,
4. fry ponded,
5. juveniles released (by life stage).

Rearing conditions at the facilities routinely monitored by hatchery staff include:

1. water flow
2. water temperature
3. dissolved oxygen
4. rearing density
5. type, date, and amount of food fed along with feed conversion rates

These data, coupled with disease monitoring information (see below) assist in interpreting survival data. Idaho HES staff will compile and report on fish culture survival data for all LSRCP steelhead hatcheries in Idaho on an annual basis. This information will be incorporated into a web-based data system which is being developed as part of Work Element 4.

In fiscal year 2009 HES will:

1. *Summarize and report key juvenile life stage survival data (from egg to release) for all LSRCP hatchery facilities in the HES annual report.*
2. *Report any significant issues regarding water quality or flow that impacted any LSRCP facility in the HES annual report.*

Objective 1c. Disease Monitoring, Prevention, and Treatment

The IDFG Eagle Fish Heath Lab conducts routine disease monitoring, and prescribes any necessary treatments.

In fiscal year 2009, HES staff will:

1. *Include a discussion of fish health history and the potential impact specific disease incidents have on the performance of program fish in an annual report.*

Objective 1d. Optimum production strategies and post release survival

Idaho HES staff assists hatchery staff in the development of appropriate experimental designs to address factors potentially limiting the success of IDFG LSRCP hatchery programs. These factors include such things as feed quality, impacts of rearing density, declining water flows, and the impacts of different feed strategies designed to meet production size and health targets.

Additionally, in an effort to document the post-release success of outmigrating juveniles released form LSRCP facilities each year, HES staff estimate the survival of smolts (from release to Lower Granite Dam) by PIT tagging 300-500 fish from representative groups of steelhead released from LSRCP facilities in Idaho. Beginning in 2008, larger groups of PIT tags were included in some groups to allow for adult return to Lower Granite Dam survival estimation. These larger groups will also be used for juvenile migration survival estimates beginning. Survival to Lower Granite Dam is estimated by querying PIT tag interrogation data from the PTAGIS regional database and using the SURPH (Lady et al. 2001) mark/recapture computer program.

In fiscal year 2009, HES staff will:

1. *Estimate and report the survival to lower granite dam for all LSRCP steelhead groups released with PIT tags.*

Estimated Budget:

Work Element 1- Evaluation of Production Strategies	
Personnel	$12,596
Operating	$3,898
Overhead	$3,134
Total	**$19,628**
% of Total M&E Budget	2.2

Work Element 2 – Estimate Hatchery Contribution

The IDFG HES and HMP staff develops annual estimates of the total contribution program steelhead make toward meeting LSRCP mitigation as well as state management objectives. Estimates include an accounting of harvest (ocean, main stem, and tributary), non-harvest interception, and project area escapement (including weir/trap recoveries).

In 2009, approximately 60,000 steelhead will be PIT tagged to evaluate project area escapement for the three LSRCP steelhead hatchery facilities. It is anticipated that these groups will also allow the HES to evaluate conversion rates between the different dams on the Snake and Columbia Rivers. Tagging began in 2008 and is anticipated to continue into the future. Evaluations of adult recoveries from these tag groups will begin with the steelhead return in 2009 for the one-ocean returns and 2010 for the two-ocean returns.

Objective 2a – Accounting of Harvest

Tasks associated with the accounting of harvest include the following:

1. Marking and Tagging
2. Operation and maintenance of CWT Laboratory
3. Estimation of Harvest
    a. Ocean and Columbia River
    b. Project area fisheries

Task 1 - Marking and tagging

With the exception of specific, supplementation releases, all steelhead released from LSRCP steelhead hatcheries in Idaho are mass-marked with an adipose fin clip. This mark allows for selective fisheries on hatchery-origin steelhead. Specific evaluation groups receive coded wire tags to address a variety of stock assessment and management objectives. Representative groups of steelhead also receive PIT tags which are used for evaluating juvenile migration survival, as well as larger groups that will also allow for evaluating adult returns to Lower Granite Dam. Due to the large number of similar release sites, not all steelhead releases in Idaho have either coded wire or PIT tag groups included with them. For those releases which do not include PIT or coded wire tags, it is assumed that juvenile survival and adult return characteristics are similar to nearby tagged releases. Some of the tagging that is used for representative releases is performed at Niagara Springs Hatchery, which is funded by the Idaho Power Company.

Mark plans are developed annually to guide the tagging and fin clipping. The estimated number of brood year 2008 juvenile steelhead to be released in 2009 and their associated marks and tags is listed in Table 4. PIT tagging levels in 2009 are expected to be similar to the 2008 level; 14,000 at Clearwater Fish Hatchery, 21,700 at Hagerman National Fish Hatchery, and 24,300 at Magic Valley Fish Hatchery.

Estimated Budget:

Marking and Tagging	
Personnel	$10,076
Operating	$3,118
Overhead	$2,507
Total	**$15,702**
% of Total M&E Budget	1.8

In fiscal year 2009, HES staff will:

1. *Assist with the development of mark and tag plans that support LSRCP and state management objectives.*
2. *Assist marking crews with PIT tagging evaluation groups of steelhead.*
3. *Perform all PIT tagging associated with Squaw Pond stock evaluation.*
4. *Enter, validate, and maintain all marking, tagging and release data in the IDFG hatchery database.*
5. *Manage, validate, and upload all PIT tag files to the PTAGIS regional database.*

Table 4. Release sites, marks, and estimated release numbers for all steelhead releases in 2009 from LSRCP steelhead facilities in Idaho.

Fish Hatchery	Release Site	Marks & Tags	Stock	Estimated # Released
Clearwater	Crooked River (S.F. Clearwater)	AD	Dwor B	90,000
		AD/CWT	Dwor B	70,000
		No Clip	Dwor B	63,000
		No Clip/CWT	Dwor B	20,000
	Lolo Cr.	No Clip	Dwor B	50,000
	Meadow Cr. (S.F. Clearwater)	No Clip	Dwor B	25,000
	Mill Cr. (S.F. Clearwater)	No Clip	Dwor B	25,000
	Red River (S.F. Clearwater)	AD	Dwor B	50,000
		AD/CWT	Dwor B	50,000
		No Clip	Dwor B	150,000
	S.F. Clearwater (Red House Hole)	AD	Dwor B	140,000
		AD/CWT	Dwor B	120,000
Clearwater Total				**853,000**
Hagerman National	Little Salmon R. Hazard Cr.	No Clip	Pah A	40,000
	Little Salmon R. Stinky Springs	AD	Dwor B	40,000
		AD/CWT	Dwor B	60,000
		No Clip	Pah A	160,000
	Lower East Fk. Salmon R.	AD	Dwor B	40,000
		AD/CWT	Dwor B	60,000
	Sawtooth Weir	AD	Saw A	710,000
		AD/CWT	Saw A	40,000
	Yankee Fk.	AD	Saw A	160,000
		No Clip	Saw A	140,000
Hagerman National Total				**1,450,000**
Magic Valley	East Fk. Salmon R. Weir	No Clip/CWT	E.F. Natural	90,000
	Little Salmon R. Stinky Springs	AD	Dwor B	155,000
		AD/CWT	Dwor B	60,000

	Lower East Fk. Salmon R.	AD	Dwor B	165,000
		AD/CWT	Dwor B	60,000
	Pahsimeroi Trap	AD	Pah A	10,000
		AD/CWT	Pah A	20,000
	Salmon R. Sec. 16 Red Rock	AD	Pah A	110,000
		AD/CWT	Pah A	20,000
	Salmon R. Sec. 17 Colston Corner	AD	Saw A	120,000
		AD/CWT	Saw A	20,000
	Salmon R. Sec. 18 McNabb Point	AD	Pah A	30,000
			Saw A / Pah A	70,000
		AD/CWT	Saw A / Pah A	20,000
	Salmon R. Sec. 18 Tunnel Rock	AD	Saw A / Pah A	60,000
	Salmon R. Sec. Shoup Bridge	AD	Pah A	80,000
	Slate Cr.	AD	Pah A	10,000
		AD/CWT	Pah A	30,000
	Slate Creek	No Clip	E.F. Natural	60,000
	Squaw Creek	AD	Dwor B	130,000
		AD/CWT	Upper Sal. B	60,000
	Squaw Creek Pond	AD/CWT	Dwor B	60,000
	Valley Creek	No Clip	Saw A	50,000
	Yankee Fk.	AD	Saw A	40,000
		AD/CWT	Saw A	20,000
		No Clip	Saw A	30,000
Magic Valley Total				**1,580,000**
Grand Total				**3,883,000**

Purchase of coded wire tags and PIT tags, and operational expenses associated with tagging and marking for steelhead at LSRCP facilities is funded with LSRCP Operation and Maintenance funds.

Task 2 – Operation of CWT Laboratory

The IDFG coded wire tag laboratory is funded primarily through the LSRCP Cooperative Agreement, but also receives some funding through IPC and other sources. Annually, the M&E staff coordinates the collection of steelhead snouts from project area fisheries and hatchery traps. Tags are subsequently extracted, read, and entered into the IDFG hatchery database. After verification, all recovery data are uploaded to the Pacific States Marine Fisheries Commission's Regional Mark Information System (RMIS). The RMIS protocol for submitting recoveries requires that recoveries for an entire year are batched together into a single file. Since steelhead return to the Idaho in the fall, and remain in the rivers throughout the winter before spawning in the spring, a single year of recoveries will include steelhead recovered from the end of one run, and the beginning of the next.

Steelhead snouts recovered in Idaho fisheries generally arrive at the lab in the winter, from the fall sport fishery, and in April or May for the winter and spring sport fishery. Snouts taken during spawning are generally transported to the lab during May and June. Because of this wide range of dates, tag extraction from steelhead goes on across a large portion of the year. The number of tags recovered in a year is variable. Since 2000, annual returns have ranged from 800-3,000.

Data is currently stored in an Access database maintained on a server with a stringent data backup protocol.

Estimated Budget:

CWT Lab	
Personnel	$22,123
Operating	$5,811
Overhead	$5,307
Total	**$33,241**
% of Total M&E Budget	3.7

In fiscal year 2009, CWT lab staff will:

1. *Coordinate the transfer of recovered snouts to the Nampa Research lab.*
2. *Extract all wire from all snouts received.*
3. *Double read and double enter all tag data into the database.*
4. *Upload recovery data to the RMIS database.*
5. *Return all non-Idaho wire recovered to the tagging agency as per the PSMFC tag coordinators agreement.*
6. *Assemble and distribute snout sample bags to all groups and individuals who will be recovering snouts in the following year.*
7. *Respond to data requests, as they arise, in a timely fashion.*
8. *Provide assistance for in-season real-time reading of wire recovered during spawning operations associated with the Squaw Pond project.*

Task 3 – Estimate Harvest

A. Ocean and Columbia River Fisheries

Estimates of catch from fisheries in the Pacific Ocean, Columbia River, and Snake River below Idaho are reported by HES staff on an annual basis. Harvest of steelhead downstream of Idaho is estimated by querying the Regional Mark Information System (RMIS) database for the number of hatchery specific CWTs recovered in downstream fisheries. Numbers of recoveries are expanded to total estimated harvest based on the reported sample rate and on the proportion of tagged fish in the group to be estimated. Some groups of coded wire tagged fish released in one location may be used to represent untagged release groups in other locations. Typically, these groups come from the same brood stock and are released at the same life stage. Estimates of harvest are reported for each of the strata listed below.

1. Pacific Ocean Coastal Fisheries
    a. Commercial
        i. Alaska
        ii. British Columbia
        iii. US Coast
2. Columbia River (Zones 1-5)
    a. Commercial
    b. Sport
3. Columbia River (Zone 6)
    a. Tribal Commercial
    b. Tribal Ceremonial and Subsistence (C&S)
    c. Non-Tribal Sport
4. Snake River (McNary to Lower Granite)
    a. Non-Tribal Sport

B. Project Area Fisheries

Estimates of steelhead harvest within Idaho are determined from phone and mail surveys of anglers who purchased Idaho steelhead tags. This angler survey is not funded by LSRCP. In conjunction with this survey, LSRCP funds creel surveys including roving creels, and check stations, which are used to determine the proportional contribution of different steelhead releases to the fishery, and to acquire biological information about harvested fish.

The HMP creel survey goal will be to sample 20 percent of harvested fish in all IDFG defined river sections within the project area. In an effort to reach the 20 percent goal, HMP staff will review river section designations and locations and current creel methodologies. Harvest estimates for each marked release group will be accompanied by error bounds. The HMP will work with the HES to provide seasonal sample rate estimates on a timely basis for eventual inclusion into the RMIS.

Estimated Budget:

Estimating Harvest	
Personnel	$236,482
Operating	$68,506
Overhead	$57,948
Total	**$362,936**
% of Total M&E Budget	40.5

In fiscal year 2009, HMP and HES staff will:

1. *Implement steelhead harvest monitoring programs in Idaho using appropriate techniques (e.g. roving creels, mandatory check stations, etc.).*
2. *Develop harvest estimates for Ocean and Columbia River steelhead fisheries by strata (see strata list above).*
3. *Develop harvest estimates for Idaho steelhead harvest by release group.*
4. *Participate in implementation and submission of sample rate data to the IDFG anadromous database.*
5. *Summarize historic mainstem and Idaho harvest estimates up to and including 2005.*

Objective 2b – Estimating Escapement

In fiscal year 2009, HMP and HES staff will estimate the escapement of LSRCP steelhead in the Columbia and Snake Rivers, as well as escapement to the project area above Lower Granite Dam and terminal areas.

Columbia River Escapement
Escapement in the Columbia River will include any LSRCP steelhead intercepted at steelhead racks in tributaries to the Columbia. This information will be obtained from the RMIS database and will be expanded using the reported catch and sample rate information.

Project Area and Terminal Escapement
The IDFG HMP staff will estimate the project area escapement (above Lower Granite Dam), by release group, for each of the three LSRCP steelhead hatcheries located in Idaho. For adults returning from juveniles released at hatchery weirs, the estimate will be based primarily on the number of recoveries at the weir and will include strays recovered elsewhere. For adults returning from offsite juvenile releases, where there is no direct escapement measurement, the proportion of fish escaping the fishery is assumed to be comparable to those released at hatchery weirs.

In fiscal year 2009, HMP and HES staff will:

1. *Estimate and report the escapement of LSRCP program steelhead recovered in Columbia River tributaries.*
2. *Estimate and report the project area and terminal escapement for steelhead groups released from LSRCP facilities.*

Estimated Budget:

Estimating Escapement	
Personnel	$25,191
Operating	$7,796
Overhead	$6,267
Total	**$39,254**
% of Total M&E Budget	4.4

Objective 2c – Smolt-to-Adult Survival

No specific research is anticipated in fiscal year 2009 directed at developing smolt-to-adult survival rates (SAR) as the primary work objective. As part of the development of products for Objectives 1 and 2 (juvenile releases and adult returns), it is possible to generate a minimum estimated SAR for each of the steelhead releases in Idaho. The estimate has to be considered a minimum, as it is not currently feasible to accurately enumerate all of the unaccounted losses for each group because of the very large return area. Unaccounted losses can include differential straying, and a variety of sources of pre-spawning mortality. Minimum estimated SARs for each release group of marked steelhead will be included in the annual report. With the recently expanded PIT tagging effort, SARs back to Lower Granite Dam will be estimated for the LSRCP hatchery facilities (Clearwater, Hagerman, and Magic Valley) beginning in 2010.

Combined Budget for Work Element #2:

Work Element 2 – Estimating Hatchery Contribution	
Personnel	$293,872
Operating	$85,232
Overhead	$72,029.70
Total	**$451,133**
% of Total M&E Budget	50.3

Work Element 3 – Legal Obligations

HES staff will participate in the development and updating of HGMPs for the LSRCP hatchery facilities as a requirement for ESA Section 7 consultation. On an annual basis, staff may devote up to five weeks of personnel time associated with this process.

In fiscal year 2009, the IDFG will continue to address actions identified in the 2000 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin to remove jeopardy on components of the IDFG hatchery steelhead program. Pending new language in an updated document, adjustments made to the IDFG stocking plan will continue as will the experimental, endemic steelhead broodstock program on the East Fork Salmon River.

Estimated Budget:

Work Element 3 - Legal Obligations	
Personnel	$12,595
Operating	$3,898
Overhead	$3,133.75
Total	**$19,627**
% of Total M&E Budget	2.2

Work Element 4 – Electronic Database Systems

In fiscal year 2009, Monitoring and Evaluation staff will collaborate with IDFG Natural Resources Policy Bureau staff and Fisheries O&M staff on the development of a comprehensive relational database to house IDFG hatchery information which will include all of the Idaho LSRCP hatcheries including Hagerman National Fish Hatchery early rearing and release information. IDFG hatchery M&E staff will play a key role in the development of this product and efforts will continue beyond fiscal year 2009.

Data elements that make up this suite of databases will be added incrementally, and existing database products will be incorporated into the new structure. The initial data elements will include the adult recovery data at the weirs. This will then be expanded to include the complete set of life history stages throughout the hatchery production cycle. This will eventually incorporate all of the marking and release information currently held in the IDFG Release database, as well as the release information stored in the IDFG stocking database. All coded wire tag recovery information will also be moved to the new database during the same time frame. As development of this new

structure proceeds, elements will be added to incorporate harvest, fish health, and genetic sample information into a form that will be readily accessible through a common portal.

All databases developed as part of this project will be developed in Microsoft SQL Server, and will be maintained on servers incorporating stringent data backup and archiving protocols. These protocols were developed to provide security, accessibility, and stability of the databases, while facilitating their integration into existing IDFG data structures.

In fiscal year 2009, HES and HMP will:

1. *Participate in the hatchery database committee process and help guide the development process.*
2. *Complete uploading process for all historic adult trapping data from all LSRCP trapping facilities.*
3. *Assist with developing protocols to capture historic spawning and final disposition data to allow uploading data into the hatchery database.*
4. *Assist with compiling and uploading historic spawning and final disposition data*

Estimated Budget:

Work Element 4 - Database Development	
Personnel	$31,488
Operating	$9,745
Overhead	$7,834.37
Total	**$49,068**
% of Total M&E Budget	5.5

Work Element 5 – Peer Review, Biometric Review, Analysis and Reporting

On an individual case basis, Monitoring and Evaluation staff will seek professional services (typically biometrics support) to facilitate the development of defendable project methodologies.

Estimated Budget:

Work Element 5 - Biometric Support	
Personnel	$3,779
Operating	$1,169
Overhead	$940
Subtotal	**$5,888**
% of Total M&E Budget	0.7

Work Element 6 – Participation in External Forums

Participate in or generate information that contributes to essential regional forums such as, but not limited to: harvest planning, mark planning, hatchery reform planning, and ESA consultation and biological opinion planning. Participation (unless otherwise approved) will not exceed three-weeks annually.

Estimated Budget:

Work Element 6 - External Forums	
Personnel	$3,779
Operating	$1,169
Overhead	$940
Subtotal	**$5,888**
% of Total M&E Budget	0.7

Work Element 7 – Regionally Significant Research

Contribute technical information to support regionally significant issues and programs such as, but not limited to, the Comparative Survival Study (BPA #199602000, if it receives funding), StreamNet (BPA #199810804), the

Collaborative System wide Monitoring and Evaluation Program (BPA # 200303600), etc. Participation (unless otherwise approved will not exceed three-weeks annually.

Estimated Budget:

Work Element 7 - Regional Research	
Personnel	$3,779
Operating	$1,169
Overhead	$940
Subtotal	**$5,888**
% of Total M&E Budget	0.7

Overall Budget Summary (Work Elements 1-7)

Work Element	Chinook	Steelhead	Total
1. Hatchery Production	$70,585	$19,627	$90,212
2. Adult Accounting	$189,815	$451,133	$640,948
3. Legal Obligations	$20,167	$19,627	$39,794
4. Electronic Database	$40,334	$49,068	$89,402
5. Peer Review	$6,050	$5,888	$11,938
6. External Forums	$6,050	$5,888	$11,938
7.Regionally Significant Research	$6,050	$5,888	$11,938
Total	**$339,052**	**$557,120**	**$896,171**

References:

Lady, James, Peter Westhagen, and John R. Skalski. 2003. Survival Under Proportional Hazards (SURPH Ver. 2.1) User Manual. 43 pp. School of Aquatic and Fishery Sciences. University of Washington, Seattle.

Attachment #3

IDAHO DEPARTMENT OF FISH AND GAME PROPERTY INVENTORY LIST

Agency	Facility	Property Number	License Plate #	Year	Class Code	Description	ACQ Cost
IDFG	Eval Evaluation	180013		1984	PH01	flash s/n SB101	$629
IDFG	Eval Evaluation	194330		1991	AU02	Canopy for project at Nampa FH	$700
IDFG	Eval Evaluation	L0388		2004	PH0102	Camera, digital w/memory stick pro media	$762
IDFG	Eval Evaluation	L0364		2002	ED0101	Computer, desktop	$1,000
IDFG	Eval Evaluation	L0365		2002	ED0101	Computer, desktop	$1,000
IDFG	Eval Evaluation	L0159		1990	TR0102	Boat, river 16 ft.	$1,150
IDFG	Eval Evaluation	L0362		2003	ED0101	Computer, PDA	$2,000
IDFG	Eval Evaluation	L0363		2002	FR2801	Tag Detector, Wand	$2,100
IDFG	Eval Evaluation	L0184		1999	FR2801	charger, unit s/n 0114, CPU s/n 9903-0273,	$2,200
IDFG	Eval Evaluation	L0192		1999	FR2801	charger, unit s/n 0240, CPU s/n 9903-0288,	$2,200
IDFG	Eval Evaluation	L0150		1999	FR2803	9903-0061, software ver. 2.0, analog s/n 9903-	$2,200
IDFG	Eval Evaluation	L0186		1999	FR2801	charger, unit s/n 0186, CPU s/n 9903-0204,	$2,200
IDFG	Eval Evaluation	L0191		1999	FR2801	charger, unit s/n 0222, CPU s/n 9903-0125,	$2,200
IDFG	Eval Evaluation	L0245		1994	FR300	Data Reader/Recorder	$2,500
IDFG	Eval Evaluation	194657		1991	ED0101	Computer, desktop	$2,535
IDFG	Eval Evaluation	194659		1991	TR01	Boat, raft and frame 14' Williwa	$2,959
IDFG	Eval Evaluation	L0404		2005	FR2801	Tag Detector, wand	$4,867
IDFG	Eval Evaluation	104815		1998	FR28	Tag detector, CWT	$6,314
IDFG	Eval Evaluation	107103		2003	FR2801	Tag Detector, handheld wand	$7,200
IDFG	Eval Evaluation	104353		1997	FR07	Fish counter, stored @ Nampa Research	$15,423
IDFG	Eval Evaluation	107265		2002	ED0102	Laptop computer	$1,500
IDFG	Eval Evaluation	107266		2001	ED0102	Laptop computer	$1,500
IDFG	Eval Evaluation	L0189		1999	FR2801	charger, unit s/n 0096, CPU s/n 9903-0197,	$2,200
IDFG	Eval Evaluation	L0405		2005	FR2801	Tag Detector, Wand	$4,867
IDFG	Eval Evaluation	107267		2001	ED0102	Laptop computer	$1,500

Attachment NO. 4

APPLICATION FOR FEDERAL ASSISTANCE Version 7/03

1. TYPE OF SUBMISSION: Application ☐ Construction ☒ Non-Construction / Pre-application ☐ Construction ☐ Non-Construction		**2. DATE SUBMITTED**	Applicant Identifier
		3. DATE RECEIVED BY STATE	State Application Identifier
		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier

5. APPLICANT INFORMATION

Legal Name: State of Idaho	Organizational Unit: Department: Idaho Department of Fish and Game
Organizational DUNS: 825201510	Division: Fisheries Bureau
Address: Street: P.O. Box 25	Name and telephone number of person to be contacted on matters involving this application (give area code) Prefix: Mr. First Name: Peter
City: Boise	Middle Name F.
County: Ada	Last Name Hassemer
State: Idaho Zip Code 83707-0025	Suffix:
Country: USA	Email: phassemer@idfg.idaho.gov
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 82-6000952	Phone Number (give area code) (208) 287-2781 / Fax Number (give area code) (208) 334-2114

8. TYPE OF APPLICATION: ☒ New ☐ Continuation ☐ Revision
If Revision, enter appropriate letter(s) in box(es) (See back of form for description of letters.) ☐ ☐
Other (specify)

7. TYPE OF APPLICANT: (See back of form for Application Types)
A. State
Other (specify)

9. NAME OF FEDERAL AGENCY: U.S. Department of Interior, Fish and Wildlife Service

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 15-☐☐☐
TITLE (Name of Program):

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Facilitate cooperation of the Service and the Idaho Department of Fish and Game to accomplish LSRCP objectives through monitoring and evaluation.

12. AREAS AFFECTED BY PROJECT *(Cities, Counties, States, etc.):* State of Idaho

13. PROPOSED PROJECT Start Date: 10/01/2008 Ending Date: 09/30/2009	**14. CONGRESSIONAL DISTRICTS OF:** a. Applicant 1 and 2 b. Project 1 and 2

15. ESTIMATED FUNDING:

a. Federal	$ 896,174.00
b. Applicant	$
c. State	$
d. Local	$
e. Other	$
f. Program Income	$
g. TOTAL	$ 896,174.00

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?
a. Yes. ☐ THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON DATE:
b. No. ☒ PROGRAM IS NOT COVERED BY E. O. 12372
☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?
☐ Yes If "Yes" attach an explanation. ☒ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

a. Authorized Representative

Prefix Mr.	First Name James	Middle Name A.
Last Name Lau		Suffix
b. Title Chief, Bureau of Administration		c. Telephone Number (give area code) (208) 334-3781
d. Signature of Authorized Representative James A. Lau		e. Date Signed 7/18/08

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Standard Form 424 (Rev.9-2003)
Prescribed by OMB Circular A-102

ASSURANCES - NON-CONSTRUCTION PROGRAMS

OMB Approval No. 0348-0040

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
Jerome G. Jan	Chief, Bureau of Administration
APPLICANT ORGANIZATION	DATE SUBMITTED
Idaho Department of Fish and Game	9/18/08